HOCHSCHULE MITTWEIDA
UNIVERSITY OF APPLIED SCIENCES

BACHELOR THESIS

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Socioeconomic impact of startup companies. The Republic of Belarus: prospects and challenges of startup ecosystem

Mittweida, 2016

Faculty: Industrial Engineering with Business Studies

BACHELOR THESIS

Socioeconomic impact of startup companies. The Republic of Belarus: prospects and challenges of startup ecosystem

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Business Administration

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Submission:
Mittweida, 10.10.2016

Bibliographic Information

Kuzmianok, Darya:

Socioeconomic impact of startup companies. The Republic of Belarus: prospects and challenges of startup ecosystem

42 Pages, Hochschule Mittweida, University of Applied Sciences,
Faculty of Industrial Engineering with Business Studies, Bachelor Thesis, 2016

Abstract

This thesis was written in order to prove the expediency of startup ecosystem support and to develop practical recommendations for Belarusian government based on the analysis of successful practices in the U.S. and Lithuania.
It covers the essence of a “startup company” and a “startup ecosystem” as well as provides the analysis of socioeconomic impact of startup companies with particular focus on job creation. It sheds light on the best startup support policies in the U.S., where most prominent startup ecosystems are operating, and Lithuania as a country with similar to Belarusian preconditions and a rapidly developing ecosystem. Furthermore, this paper deals with Belarus‘s peculiarities regarding fostering startup ecosystem growth. It assesses recent economic development of Belarusian IT sector and gives an insight into its competitive advantages and challenges.
The subsequent paper is based on internet research using articles, presentations, reports and studies, websites and official legal documents.

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Glossary of Terms

BPO	Business Process Outsourcing
etc.	et cetera
EU	European Union
FFF	Family, Friends, Fools
GDP	Gross Domestic Product
PHT	Park of High Technologies (Belarus)
IFC	International Finance Corporation
IPO	Initial Public Offering
IT	Information Technology
ITC	Information and Communication Technology
R&D	Research and Development
SME	Small and Medium Enterprises
TEA	Total early-stage Entrepreneurial Activity
VAT	Value-Added Tax
VC	Venture Capital
VCA	Lithuanian Private Equity and Venture Capital Association
U.S.	the United States of America
USD	U.S. dollars

1 Introduction

1.1 Starting point and motivation

Nowadays we discern the decline of traditional way of running a business. It seems like the traditional Industrial Era approach of decreasing costs and the traditional approach of increasing revenue have almost exhaust their potential. More dollars in the sharing or renting economy means fewer dollars in the traditional producer-consumer marketplace, and many companies thriving today are facilitators of existing physical assets rather than producers of new ones.[1] The Global Startup ecosystem report provides us with some good examples: Uber - the world's largest taxi company owns no vehicles, Facebook - the world's most popular media owner creates no content, Airbnb - the world's largest accommodation provider possesses over no real estate.

These and many other startups breed innovative solutions that can transform whole industries. They influence the economy by attracting investment, creating jobs and bringing innovation to the society. At the same time, founding a startup is connected with high risk of failure.[2]

The question hereby is: how to minimize the risks and how to ease the creation of successful startups within a country? The answer is to support the evolution of startup ecosystems that facilitate each step of the startup development.

Despite the fact, that Belarusian IT sector possesses over a huge number of competitive advantages which may serve as a trigger to startup ecosystem growth, fewer studies exist, analyzing in-depth a nascent Belarusian startup ecosystem and the prospects of its development. While a healthy national economy requires a healthy, competitive startup ecosystem, it is of great importance to desing and implement a strategy for its support.

[1] http://www.businesslocationcenter.de/imperia/md/blc/service/download/content/the_global_startup_ecosystem_report_2015.pdf (06.08.2016)

[2] http://www.forbes.com/sites/theyec/2015/03/05/the-major-reasons-startups-fail-and-how-you-can-avoid-them/#7d11a65e11df (05.08.2016)

1.2 Aims and structure

Acknowledging existing studies, doing research on socioeconomic contribution of startup companies as well as analysing startup support policies in the U.S. and Lithuania, this paper aims to prove the expediency of startup ecosystem support and to develop practical recommendations for Belarusian government for fostering its development in the Republic of Belarus.

Despite this introduction, this thesis consists of five main sections. Foundations are required by reviewing today's literature and studies. It is of great significancy to cover the essence of a "startup company" and a "startup ecosystem", while till now there is no common definition for these terms in literature. This fact underpins the necessity of the research upon some of the specific features that differentiate a startup from other enterprises – namely the development stages and financing sources. Then, the analysis of socioeconomic impact of startup companies is presented, demonstrating significant influence on job creation and their contribution within startup ecosystems. Subsequently, startup ecosystem support policies in the U.S. and Lithuania are being analysed. The United States represent a country with most prominent ecosystems (here just a few of them - Sillicon Valley, New York City, Los Angeles). Lithuania, a country with similar to Belarusian preconditions (absence of a huge domestic market, availability of talent pool), serves as a good example of its rapidly developing ecosystem. Next, this paper assesses recent economic development of Belarusian IT sector followed by the analyses of its competitive advantages. The challenges of Belarusian startup ecosystem are also examined and recomendations for startup ecosystem development are given based on the foreing practices as well as country's pecularities. Last, a brief summary of the work is offered.

2 Foundations

To formulate recommendations for the development of a startup ecosystem and startup support it is necessary first to understand the essence of these terms. Unfortunately, there is no common definition. This section reviews most recent studies and articles devoted to startups and startup ecosystems in order to find out specific features of startups, to differentiate them from other enterprises, to define financial sources on different development stages and their role in a startup ecosystem.

2.1 Definition of a startup and a startup ecosystem

2.1.1 Startup company

A startup company or a startup is a relatively new term. It became internationally widespread during the dot-com bubble when a great number of dot-com companies were founded. Because of this story, startups are often assumed to be solely technology-based companies, but this is not necessarily the case: the essence of startups is generally related to the concepts of innovation, scalability, and growth.[3]

Steve Blank, a US businessman and Developer of the Customer Development methodology, defines startup as an "*entrepreneurial venture or a new business in the form of a company, a partnership or temporary organization designed to search for a repeatable and scalable business model*". Within this definition, a startup can be a new venture or a new business unit in an existing company. If a business model is unknown - that is just a set of untested hypotheses - this business is a startup searching for a repeatable business model. Once a business model (market, customers, channels, pricing, etc.) is known, the company will be executing it. Search versus execution is what differentiates a new venture from an existing business unit. [4]

Startup is a temporary organization with a key objective - stop being such and transform into a big business, or else leave the market and cede the position. Thus, a company that is unable to scale quickly refers to small businesses. The basic of a startup company is an *innovative technology in a particular area or an innovative business model*. Y Combinator accelerator head Paul Graham underlines another important issue in startup definition. It

[3] https://en.wikipedia.org/wiki/Startup_company (14.04.2016)

[4] https://steveblank.com/2012/03/05/search-versus-execute/ (15.04.2016)

should be focused on growth unconstrained by geography. A restaurant is not a startup, nor is a franchise. According to Paul Graham these are the factors that indicate that a startup company cannot be considered as such any more: acquisition by a larger company or IPO, more than one office, revenues greater than 20 million USD, more than 80 employees, over five people on the board.[5]

At the same time, such authoritative sources as Kauffman Foundation and KfW Group define startup as a young company operating in the market less than a year.

The Global Startup Ecosystem Report 2015 points out the main differences between startups and other businesses, among these are:

1. **High chances of failure**. A startup company has a 75% chance of failing.
2. **Different financing needs**. Banks see startups as completely unacceptable risk. VC firms do not usually invest in ideas but step in on later development stages.
3. **Participation in business accelerator and incubator programs**, that provide them with access to mentors and investment.
4. **Different talent needs**. Working for an early-stage startup usually implies that there is little standard of working procedures, more often people have to figure out how to accomplish things that have never been done before. These objectives require rare talents working together at the same place. To exemplify, 70% of Silicon Valley software developers are born in foreign countries.
5. **Different Inputs**. Usually startups spend a lot of time on market research, while their products have never been tasted before.[6]

All of these factors have contributed to higher concentrations of startups in certain geographic locations - in startup ecosystems.

2.1.2 Startup ecosystem

A **startup ecosystem** *is formed by people, startups in their various stages and various types of organizations in a location (physical and/or virtual), interacting as a system to create new startup companies*.[7]

These organizations can be further divided into such categories: universities, funding organizations, support organizations (incubators, accelerators, co-working spaces etc.), research organizations, service providing organizations (legal, financial services etc.) and

[5] http://www.forbes.com/sites/natalierobehmed/2013/12/16/what-is-a-startup/#30ae5f974c63 (14.04.2016)

[6] http://www.businesslocationcenter.de/imperia/md/blc/service/download/content/the_global_startup_ecosystem_report_2015.pdf (10.04.2016)

[7] http://www.startupcommons.org/what-is-startup-ecosystem.html (22.04.2016)

large corporations. Different organizations typically focus on specific parts of the ecosystem function or startups at their specific development stages.

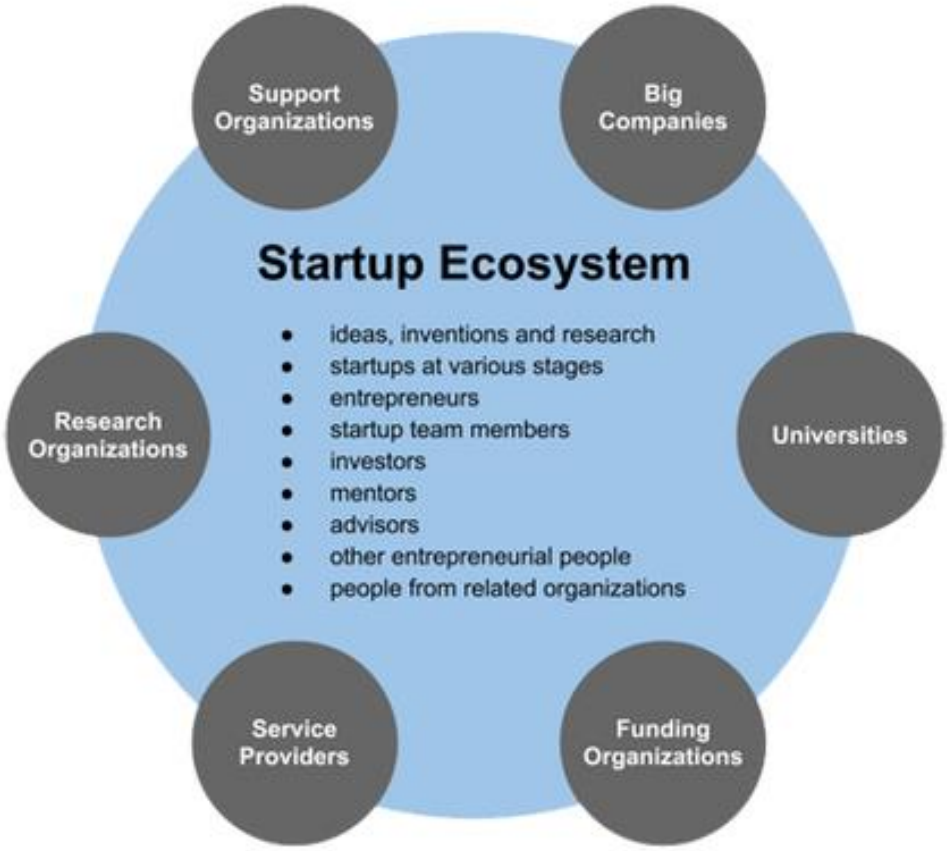

Figure 1: Startup ecosystem[8]

People from these roles are regarded as linked together through shared events, activities, locations and interactions. This communication plays a key role in the movement of resources (skills, money) through the system helping to create new potential startups or strengthening the already existing ones and hence influencing the quantity of startup build. Failures of startups, release people with improved skills and time for either establishing a new start-up or joining to an already existing one.[9]

The development of each ecosystem drive from different (or even unique) resources and policies.

[8] http://www.startupcommons.org/what-is-startup-ecosystem.html (22.04.2016)

[9] http://www.startupcommons.org/what-is-startup-ecosystem.html (22.04.2016)

2.2 Stages of startup development

Max Marmer, Bjoern Lasse Herrmann and Ron Berman list in the Startup Genome Report four major startup development phases[10], which are:

1. **Discovery**. Startups in this stage are focused on the understanding of whether or not their idea or concept is valuable. Activities in which startups might be engaged: interviewing of those that make up the potential market, producing some prototypes of the product or service, joining an incubator or accelerator group, seeking financing from friends and family, establishing relationships with mentors.
2. **Validation**. First attempts to sell the product or service and gauge the potential market and its value as well as experience in how to achieve best sales. Therefrom the main activities at this stage are: refining the product, establishing the metrics, obtaining of seed funding and making the first key hires.
3. **Efficiency**. A company is heading to the point where it can start to scale, but its acquisition model is not working to its full potential. A business model must be refined and fine-tuned. Activities at this stage are: clarifying the value proposition, refining the customer experience, enhancing the growth process, and creating scalability or sales. Moreover, complementary framework needs to be put in place (social media, publishing blogs).[11]
4. **Scale**. A company have a product and market fit and it makes attempts to drive firm growth aggressively. Activities at this stage: a round financing, executive hires, process refinement, and scalability improvements.[12]

At the following stages of development, a company cannot be referred as a startup, because by this time a company already represents a well-managed, profitable and fast-growing business structure. It could already become an industry leader with high-qualified staff and proven business processes.[13]

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[10] https://s3.amazonaws.com/startupcompass-public/StartupGenomeReport1_Why_Startups_Succeed_v2.pdf (25.04.2016)

[11] https://majoran.co/startup-stages/ (25.04.2016)

[12] http://www.evancarmichael.com/library/stephen-blakesley/Four-Stages-of-Startup-Development.html (26.04.2016)

[13] https://s3.amazonaws.com/startupcompass-public/StartupGenomeReport1_Why_Startups_Succeed_v2.pdf (25.04.2016)

2.3 Startup finansing sources

To launch any business initial capital is required. Here are the most common funding sources for startup companies:

1. **Bootstrapping** is a situation in which an entrepreneur starts a company with little capital. He or she attempts to found and build a company from personal finances or from the operating revenues of a new company. Bootstrappers usually rely on personal savings, lowest possible operating costs, fast inventory turnaround, and a cash-only approach to selling. Many of today's largest corporations (such as Apple computer, Clorox Co., Coca Cola, Dell Computer, Hewlett-Packard, Microsoft) began as bootstrapped ventures. Most of world's startups still follow this road; either because there is no alternative, or because of the unmatched control and independence it offers.[14]
2. **FFF (family, friends, fools)**. Borrowing from friends and family has some unique advantages, including low- or no-interest payment as well as avoiding the hassles of bank contracts.[15] However, FFF often help only because of their desire to support a founder, not because of the profit expected. This may be a reason for founders' carelessness with the funds raised.
3. **Angel investors**. This form of investing generally occurs at company's early stages, investors expect 20 - 25% return on their investment.[16] *Super angels* are regarded as business angels with a difference, that they are investing larger amounts of money, representing an alternative to venture funds.
4. **Venture funds** can devote several million dollars to the growth of a young company that has established its potential to market valuable new technology, goods or services. Venture firms invest pools of money, raised from wealthy individuals, in enterprises with potentially high rates of return.[17]
5. **Crowdfunding** is the practice of funding a project or venture by raising many small amounts of money from a large number of people, typically via the Internet.[18] Many sites allow companies to raise money in exchange for rewards or products. Others have an equity-based model in which businesses give up a bit of their share.[19]

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[14] http://www.businessdictionary.com/definition/bootstrapping.html (5.05.2016)

[15] http://www.businessnewsdaily.com/1733-small-business-financing-options-.html (5.05.2016)

[16] http://www.businessnewsdaily.com/1733-small-business-financing-options-.html (5.05.2016)

[17] http://www.cnbc.com/2012/05/25/11-Ways-to-Finance-a-Start-Up.html?slide=10 (6.05.2016)

[18] http://www.oxforddictionaries.com/us/definition/american_english/crowdfunding (6.05.2016)

[19] http://www.businessnewsdaily.com/1733-small-business-financing-options-.html (5.05.2016)

6. **Startup incubator** implies physically locating a business in a central working space with other startup companies. A startup company can stay in the space as long as it needs to, for example, until it has grown enough to relocate. The mentorship is typically provided by proven investors and startup CEO peers. In many countries startup incubators are financed from the regional or national budgets within the economic development strategy.
7. **Startup accelerator**. The time in accelerator space is typically limited to a 3-4 month period, intended only to jumpstart a business. Usually the investments from the accelerator itself are very little, but the time in the accelerator should largely improve the chances of raising venture capital from a third party entity on the back end, after graduating from the program. Mentorship is coming from the entrepreneurs that are affiliated with the accelerator (many of which are proven CEOs or investors looking for their next opportunity).[20]
8. **Bank loans**. Banks see startup loans as risky investments. To get a loan on favourable terms, an entrepreneur needs a solid business plan and extensive documentation of creditworthiness. Moreover, a bank often have to go on risk lending money without security, which could compensate a possible failure. All this contribute to banks' preferences to give loans to already existing enterprises, to fund their next growth spurt.
9. **Federal and state support** may include grants, subsidies, and favourable credits. One of the most important advantages of such programs is that subsidies and grants are essentially free money. On the other hand, to get into a federal or state program, new entrepreneurs have to spend a lot of time on completing paperwork or justifying their business model. Moreover, one should be prepared for some tough competition as well as monthly or quarterly "check ins".

Table 1 presents advantages and disadvantages of each funding sources concerning raising time, accessibility of the capital, subsequent investor control.

Source	Advantages	Disadvantages
FFF (Family, Friends, Fools)	speed and accessibility; often does not require to be returned	low risk appraisal; possibility not to meet the expectations of the family
Business Angels / Super Angels	lack of control; large amounts of money	lack of control and advice

[20] http://www.forbes.com/sites/georgedeeb/2014/08/28/is-a-startup-incubator-or-accelerator-right-for-you/#532ddb1a3386 (6.05.2016)

Venture Funds	professional investors as a quality mark; offer advice to the entrepreneurs	high degree of control; often look to recover their investment within a 3- to 5-year time window
Business Incubators	support at all stages of the project development; accessibility; cheap capital	high degree of control
Business Accelerators	funding of various programs	high competition among the participants; in most cases only mediators
Crowdfunding	validates the product; helps to establish a customer base	risk of having the idea ripped off; time consuming
Bootstrapping	lack of control	difficulties in implementation; lack of funds
Banks	widespread source	difficulties in obtaining large sums; high degree of control
Federal and State Support	cheap or free capital	time consuming; high degree of control

Table 1: Advantages and disadvantages of different sources of startup funding

Most of the time each stage of startup development has its own most common financing sources. For instance, FFF represent a “trigger” for many modern startups, offering investment at the discovery stage. 90% of the nascent business investors are family members, friends or business angels. At the stage of validation, some private equity funds join the list of possible investors. Startups that have reached the third stage may become interesting for venture funds. Companies at the scale stage have even more opportunities to attract capital from government, commercial banks, funds and other entities. The next step of company’s development is called “exit”. It is often implemented through IPO and implies full or partial exit of business investors that have taken part in startup development at the previous stages.[21]

[21] http://startup-house.ru/stati-pro-startapy/link/etapy-razvitiya-startapov (10.05.2016)

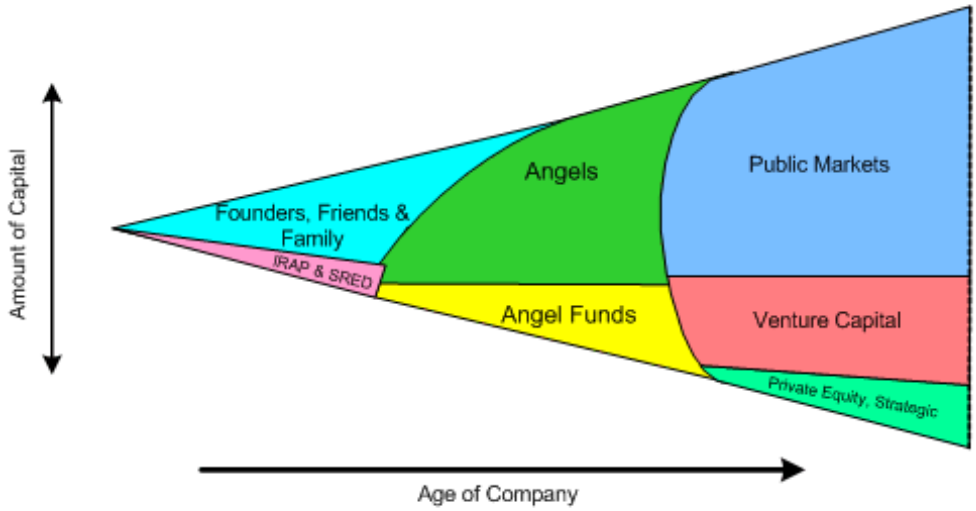

Figure 2: Sources and sequence of startup funding[22]

As far as ways to finance a startup company are concerned, it is worth considering the main funding sources in a startup ecosystem. Figure 3 makes it clear, that business angels represent the most important source in the financing of Silicon Valley's ventures.

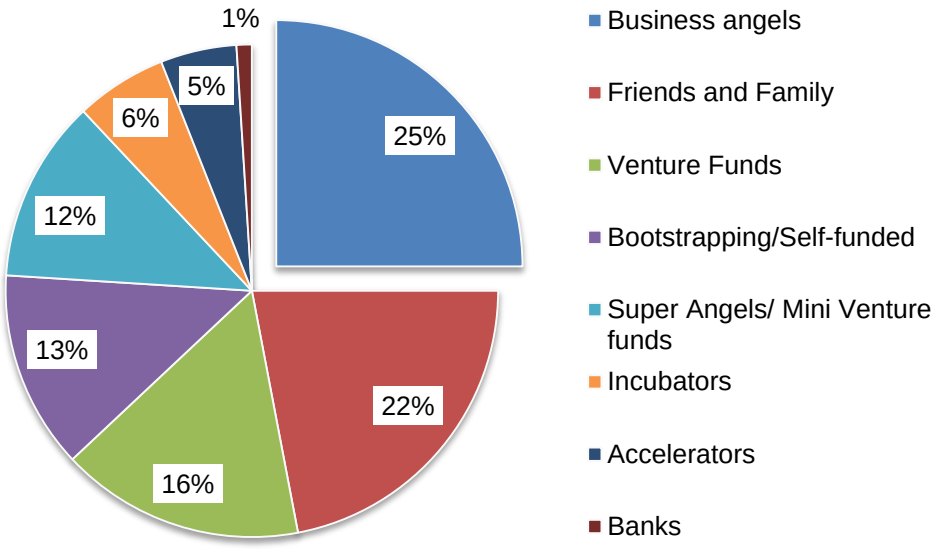

Figure 3: of Startup funding sources in Silicon Valley, 2012[23]

[22] http://www.angelblog.net/Startup_Funding_Sources_of_Financing.html (10.05.2016)

According to the Centre for Venture Research of the University of New Hampshire, the angel investor market in the United States in 2013 reached 24,8 billion USD (an increase of 8.3% over 2012), with a total of 70,730 entrepreneurial ventures received angel funding. Since 2010 angel investments represent a stable growth in dollar investment and in the number of investments, while contributing significantly to job creation and startup financing at the validation and efficiency stages (21% of angel investments in 2013).[24]

[23] ttp://www.clustermapping.us/sites/default/files/files/resource/Startup%20Ecosystem%20Report%202012.pdf (11.05.2016)

[24] http://paulcollege.unh.edu/sites/paulcollege.unh.edu/files/2013%20Analysis%20Report%20FINAL.pdf (11.05.2016)

3 Socioeconomic impact of startup companies

Positive socioeconomic impact of startups proves the necessity of creating favourable conditions for startup foundation and implementing support programs. This section describes a positive effect that startups has on job net creation in comparison with the contribution of existing firms as well as presents the advantages for each of the participant in a startup ecosystem.

3.1 The role of startup companies in job creation

The data gathered in recent studies suggest that young firms contribute not only to innovation and to economic growth, but also have a significant influence on job creation.

The study Global Insight Venture Impact 2011 dwells on the role of startup companies in the U.S. economy, which generated revenue in 2011 made up 21% of the U.S. GDP. Moreover, these companies employed 11% of the total U.S. private workforce (11, 9 million people).[25] Kauffman Foundation points out, that companies less than one year old have created an average of 1, 5 million jobs per year over the past three decades in the U.S.[26]

In Germany newly established companies show an increasing influence on job creation as well. According to 2015 KfW Start-up Monitor, around 915,000 people took the plunge into self-employment in 2014 (about 47,000 more than in 2013). These companies created a total of 745,000 full time positions in 2014 (an increase of more than 140,000 in comparison to 2013).[27]

According to the Kauffman Foundation research conducted in the USA, new firms represent the most powerful source of net job-creation. It seems quite strange, while according to business life circle, companies are to extend their workforce during the stage of growth that usually comes after the first year of existence. Nevertheless, firms operating

[25] http://www.jumpstartnetwork.org/sitecore/content/jumpstartinc/home/results/dl/~/media/JumpStartInc/Images/Results-Page/2011-NVCA-VentureImpactReport.ashx (26.05.2016)

[26] http://www.kauffman.org/~/media/kauffman_org/resources/2014/entrepreneurship%20policy%20digest/september%202014/entrepreneurship_policy_digest_september2014.pdf (27.05.2016)

[27] https://www.kfw.de/KfW-Group/Newsroom/Aktuelles/Pressemitteilungen/Pressemitteilungen-Details_276737.html (27.05.2016)

more than a year can both create and eliminate jobs. On the contrary, a startup or zero age firm, only creates jobs because it has no gross job destruction. Clearly, net job creation can be positive in the existing firms as well, but according to most years on record in the United States, that is not the case.

That is why when it comes to job-creating power; it is not the size of the business that matters as much as age does. New and young companies are the primary source of job creation in the American economy. Not only that, but these firms also contribute to economic dynamism by injecting competition into markets and spurring innovation.

Representing 95% of all U.S. companies, businesses with fewer than fifty employees are undoubtedly important to overall economic strength. So there are relatively few large companies that employ millions of Americans. Yet, neither group contributes to new job creation in the way young, entrepreneurial firms do. In fact, between 1988 and 2012, companies more than five years old destroyed more jobs than they created in all but eight of those years.[28]

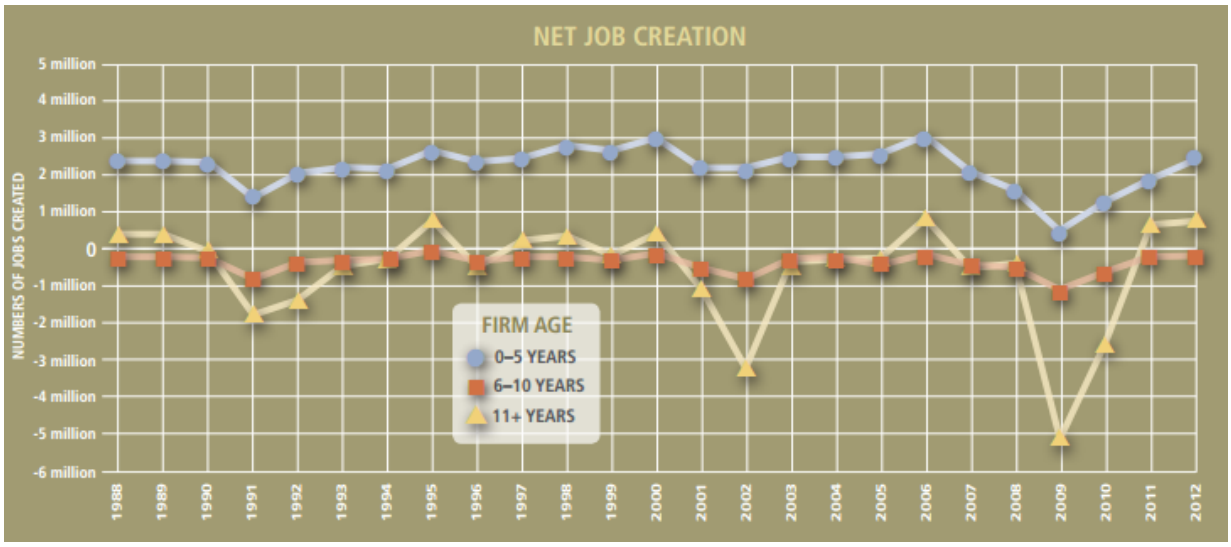

Figure 4: Net job creation by firm age in the U.S., 1988 - 2012[29]

The following conclusions can be made in reference to the Republic of Belarus. Firstly, it represents an important argument against the traditional views to hold to the existing jobs at the expense of economic growth (for example, while imposing the conditions of saving workplaces during privatization). Dynamic economic growth has a positive impact on new business establishments that correlates with job creation. Under normal conditions, this effect would outweigh preserving existing jobs - as a result, more (but not less) people will

[28] http://www.kauffman.org/~/media/kauffman_org/resources/2014/entrepreneurship%20policy%20digest/september%202014/entrepreneurship_policy_digest_september2014.pdf (27.05.2016)

[29] http://ow.ly/Ocbls (27.05.2016)

have a job. Secondly, the study shows that orientation of startups and creating appropriate startup ecosystem may become a solution to the problem of unemployment, while new firms contribute largely to high rates of job creation.

3.2 Economic impact of startup ecosystems

Besides fostering job creation, startup ecosystems contribute considerably to the strengthening of country's economic growth by encouraging nascence of innovative and competitive firms. While creating innovations, startup ecosystems beat a path for existing companies towards digital transformation.[30]

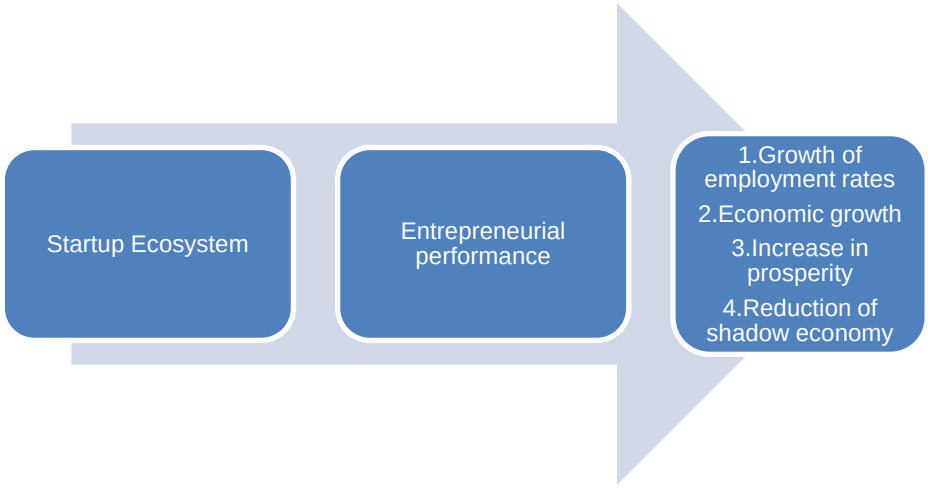

Figure 5: Dependency of economic prosperity from startup establishments[31]

As mentioned before, a startup ecosystem consists of many organisations that take advantages from participation. For public officials, job creation and tax revenues (fiscal health) may be the primary objectives. For banks, a larger and more profitable loan portfolio may be the benefit. For universities, knowledge generation, reputation, and endowments from donations may be the benefits. Entrepreneurs and investors advantage from wealth creation. For corporations, innovation, product acquisition, talent retention, and supply change development may be the objectives. Many stakeholders must benefit in order that a startup ecosystem can be self-sustaining.[32]

[30] http://ikt.nrw.de/fileadmin/user_upload/Dokumente/Startup-Ecosystem_NRW.pdf (30.05.2016)

[31] http://ikt.nrw.de/fileadmin/user_upload/Dokumente/Startup-Ecosystem_NRW.pdf (30.05.2016)

[32] https://hbr.org/2014/05/what-an-entrepreneurial-ecosystem-actually-is (01.05.2016)

For further analysis of startup ecosystem impact the Global Startup Ecosystem Ranking 2015 will be considered, which compares the top 20 startup ecosystems from all over the world.[33]The full ranking can be found in Appendix A-I.

The predominant amount of startup ecosystems is located in North America (10 out of 20).To name just a few: Silicon Valley, New York, Los Angeles - Orange County, Boston, Chicago, Seattle, Austin. The Bay Area, which is practically synonymous with high growth technology startups, has achieved top rankings in Performance, Funding, and Talent - making for an overall ranking of number one.

Silicon Valley has earned its reputation as the global tech mecca with 14,000 to 19,000 startups and 1, 7 to 2, 2 million high-tech workers. It is a place where successful stories such as Apple, Google, Facebook, and countless others started. Just these three companies combined together have a market cap of 1,5 trillion USD and employ more than 165,000 people worldwide. The Silicon Valley Competitiveness and Innovation Project's report shows that each high-tech worker in its ecosystem helped to generate roughly five jobs in the service sector, ranging from physicians and teachers to restaurant workers and landscapers.[34] Silicon Valley continues to be an inspiration point to other startup communities and serves as a centre for founders and high tech talent.[35]

New York has evolved into the second strongest startup ecosystem in the world over the past three years, with approximately 7,100 to 9,600 active tech startups and the second highest amount of VC investments. In total, New York has created approximately 90,000 tech jobs. The city has been recognized by supporting startups. There is an opportunity for the city to upgrade itself and fully adapt to the Information Era. With a local GDP of approximately 1, 5 trillion USD, the New York ecosystem is a large playground to test and market all kinds of products. This is a key reason why the city has become the most popular ecosystem for startups to build out a second office for sales and marketing. [36]

Los Angeles is ranked the third-strongest ecosystem in the world. With 34 billion USD, it takes the fifth place in Ecosystem Value (estimated value of all startups at or prior to exit). The city is estimated to have around 200,000 engineers hailing from a variety of talent pools such as the renowned California Institute of Technology.

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[33]http://www.businesslocationcenter.de/imperia/md/blc/service/download/content/the_global_startup_ecosystem_report_2015.pdf (30.05.2016)

[34] http://graphics8.nytimes.com/packages/pdf/technology/SVCIP_2015_PDFfinal.pdf (30.05.2016)

[35]http://www.businesslocationcenter.de/imperia/md/blc/service/download/content/the_global_startup_ecosystem_report_2015.pdf (30.05.2016)

[36]http://www.businesslocationcenter.de/imperia/md/blc/service/download/content/the_global_startup_ecosystem_report_2015.pdf (30.05.2016)

4 International experience of startup ecosystem development

To analyze international experience of startup support policies two countries will be considered in this section. First startup ecosystem activity steams from the United States and nowadays this country has achieved the best results in its development. At the same time, to formulate the recommendations for the Republic of Belarus it is important to analyze a country with comparable preconditions and a fast-growing start-up ecosystem. This justifies the choice of the second country - Lithuania. It does not possess over a huge domestic market, but rely on its talents, which makes it similar to the Republic of Belarus.

4.1 Startup support policy in the United States

While admitting the fact that nowadays the United States are booming from startup activity, the following questions arise: what are the advantage of running a start up in the U.S. and what are the actions taken by the government to support startup ecosystems.

Most likely, reasons to choose the U.S. to start up a company lie in the following key areas:

1. **Financing.**
   Startups are easier to start in America because it is easier to get funding. Specially, it is true for business angel investment. Google might have never got to the point where they could raise millions from VC funds if they had not first raised a hundred thousand from Andy Bechtolsheim. And he could help them because he was one of the founders of Sun. This pattern is repeated constantly in the U.S. startup hubs.[37] In the U.S. even friends and family will back one in business most likely than in any other country.

   Moreover, infrastructure for raising a capital is widely developed. Gust considered to be one of the biggest platforms for connecting investors with entrepreneurs. So far, Gust has distributed over 1, 8 billion USD to startups.

   It is clear that government policy plays an important role in organizing financial activity. There are a couple of wide initiatives helping startups to obtain the capital:
   - *Startup America*. The US Small administration Program focused on helping startups secure funding and growth opportunity. These are five key areas of Startup America:
     1. Unlocking access to capital to fuel startup growth
     2. Connecting mentors and education to entrepreneurs
     3. Reducing barriers and making government work for entrepreneurs
     4. Accelerating innovation from “lab to market” for breakthrough technologies

[37] http://paulgraham.com/america.html (01.07.2016)

5. Unleashing market opportunities in industries like healthcare, clean energy, and education[38]

Furthermore, within this initiative a 1 billion Early-Stage Innovation Fund was created, to support high-growth companies that face difficult challenges accessing capital, particularly those without the necessary assets or cash flow for traditional bank funding.[39]

- *Grands.gov*. Single source that helps entrepreneurs discover funding from government agencies.
- *Regulation Crowdfunding Title III of the Jumpstart Our Business Startups Act* ("JOBS Act") concerns the regulation of crowdfunding. It governs the offer and sale of securities and includes provisions relating to the regulation of "funding portals" and brokers that facilitate the offer and sale of securities in a crowdfunding effort. The rules establish a framework under which a large number of investors (the "crowd") can invest in the securities of, and provide capital to, issuers particularly startups and small businesses, using the Internet.[40]

  Section 4(a) (6) imposes the following limitations on the aggregate amount of securities that can be sold to any single investor during a 12-month period in reliance on the exemption:

Financial Position of Investor	Aggregate Limits on All Crowdfunding Investments by Investor
Annual income or net worth<100,000 USD	Greater of: 2,000 or 5 percent of the lesser of the investor's annual income or net worth
Annual income and net worth≥100,000 USD	Lesser of: 10 percent of the investor's annual income 10 percent of the investor's net worth $100,000

Table 2: Limitations on the aggregate amount of securities by virtue of Regulation Crowdfunding[41]

[38] https://www.whitehouse.gov/economy/business/startup-america/progress-report#access-to-capital (06.07.2016)

[39] https://www.whitehouse.gov/startup-america-fact-sheet (04.07.2016)

[40] http://www.klgates.com/joining-the-crowd--sec-adopts-final-crowdfunding-regulations---part-i-11-10-2015/ (06.07.2016)

[41] http://www.klgates.com/joining-the-crowd--sec-adopts-final-crowdfunding-regulations---part-i-11-10-2015/ (06.07.2016)

Bringing in a new class of investors with Title III, crowdfunding opens up a tremendous amount of capital available to early stage companies.

2. **Talent.**
The U.S. possess over a number of top technological universities. Stanford and Berkeley are located in Northern California. This means that there will always be a fresh talent, fresh ideas, and access to intellectuals.

In some countries the absence of top computer science schools is the result of a deliberate policy. “The German and Dutch governments, perhaps from fear of elitism, try to ensure that all universities are roughly equal in quality. The best professors are spread out, instead of being concentrated as they are in the US. This probably makes them less productive, because they don't have good colleagues to inspire them. It also means none of universities will be good enough to act as a mecca, attracting talent from abroad and causing startups to form around it”[42], as Paul Graham, head of Y Combinator.

Moreover, the United States welcome immigrants. 13% of the U.S. population is foreign-born, 24% of tech and engineering companies created between 2006 and 2012 had an immigrant founder.[43]

There are a plenty of ways to come to the U.S., but one of the most popular for high-skilled workers is probably an H-1B visa. The U.S. Citizenship and Immigration Services issues 65,000 H-1B visas per year.[44] This speaks for itself: immigrants contribute a lot to the U.S. economy; thereby constant debates on improving US immigration policy and enacting the Startup Visa (allowing foreign-born entrepreneurs to stay legally in the U.S. if they can raise 100,000 USD in capital and hire at least two American workers during their first year) are taking place.

3. **Mentoring.**
In the U.S. it is not very difficult to find practiced management or mentors to help in creating a startup company. Working with a mentor help the beginners to avoid common mistakes and scale quickly. In this regard, regional development leaders pay more and more attention to the supporting actors and organizations in startup ecosystems such as accelerators.

Growth in US-based accelerators took off after 2008. They grew from 16 programs that year to 170 programs in 2014.[45]

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[42] http://paulgraham.com/america.html (01.07.2016)

[43] http://www.bloomberg.com/news/articles/2016-02-10/how-tech-startup-founders-are-hacking-immigration (07.07.2016)

[44] https://www.uscis.gov/working-united-states/temporary-workers/h-1b-specialty-occupations-and-fashion-models/h-1b-fiscal-year-fy-2017-cap-season (09.07.2016)

[45] http://www.brookings.edu/research/papers/2016/02/17-startup-accelerator-programs-hathaway (03.07.2016)

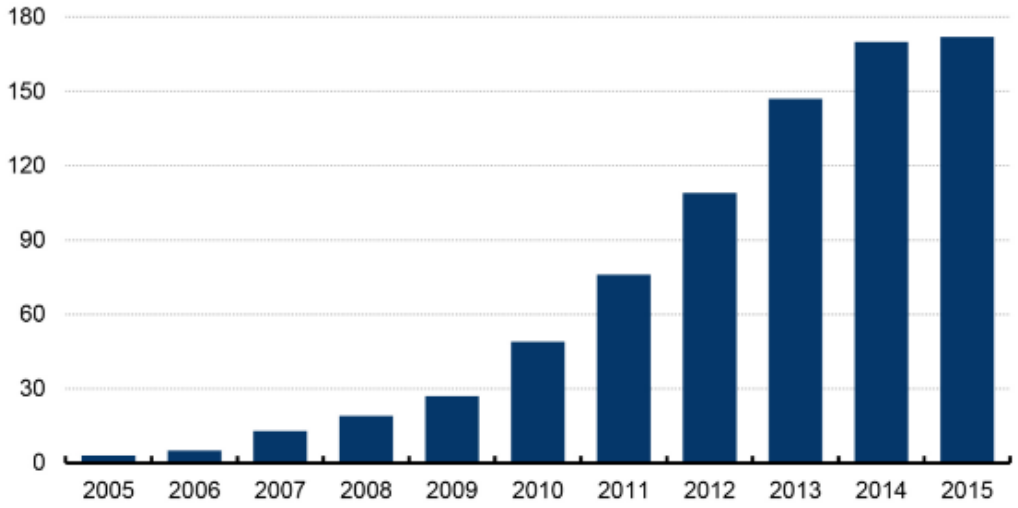

Figure 6: U.S. Accelerator pool by year, 2005 - 2015[46]

Brad Feld, a co-founder of TechStars, a global accelerator program, likened the accelerator experience to immersive education, where a period of intense, focused attention provides company founders an opportunity to learn at a rapid pace. Accelerators may have a big effect on attracting seed and early-stage financing, as well as additional investors to a community.

The Small Business Administration has adopted an aggressive strategy to bolster the proliferation of accelerator programs and other startup ecosystem models throughout the country with its Growth Accelerator Fund Program. With its inception in 2014, the SBA awarded 2,5 million USD in cash prizes to a group of 50 such organizations. The program expanded in 2015, offering 4 million USD in cash prizes to 80 organizations throughout the country.[47]

4. Legal Framework.

In spite of the fact, that corporate tax in the United Stated can be as high as 40%, it is still in top 10 countries ranked by ease of doing business according to famous rating Doing Business 2015.

The American laws are not too fussy in regards to the place of starting a business. “Hewlett-Packard, Apple, and Google were all run out of garages. Many more startups were initially run out of apartments. If the laws against such things were actually enforced, most startups wouldn't happen”[48], as Paul Graham.

On the other side, entrepreneurs with high-growth startups need to be sure they have their ideas protected. It can have a cascading effect on various seemingly unrelated aspects of their business including budgeting, fund-raising, product

[46] http://www.brookings.edu/research/papers/2016/02/17-startup-accelerator-programs-hathaway (03.07.2016)

[47] http://www.brookings.edu/research/papers/2016/02/17-startup-accelerator-programs-hathaway (03.07.2016)

[48] http://paulgraham.com/america.html (01.07.2016)

launch, market entry and manufacturing tie-ups.[49] For example, a patent can attract investors, since it may serve as an entry barrier against competitors. Furthermore, the “patented” or "patent pending" labels may also help deter would-be competitors, or force those competitors to adopt different designs and technologies. Finally, it can also provide an additional opportunity to generate revenue from licensing.[50]

While most European countries do not allow business method and software patents, the U.S. system provides several cost saving measures to help startups participate in the patent system. For example, the U.S. Patent and Trademark Office offers small entity or micro entity status to qualifying companies, allowing startups to pay reduced fees.[51]

Moreover, the U.S. government offers other opportunities such as trademark and copyright protection to secure Intellectual property. For bootstrapping tech startups, confidentiality agreements and trade secret protection can work just as well as patent registration.

5. **Culture.**
   There is a culture accepting startups in the U.S. Most startups fail, but it is seen as a part of learning process.

   In the U.S. work is less identified with employment. There are almost 28 million small businesses and over 22 million are self-employed.[52] According to TEA rates, 13% of U.S. adults started and ran new businesses in 2014.[53] These figures speak for themselves - the culture of entrepreneurship in the United States is very high. People are eager to start their own businesses taking risks and encouraging others to be self-employed.

   On the contrary, there are some behavioral patterns in many traditional counties that reflect on the attitude towards employment: an employee would better work for a company in return for the company’s protection like coverage of medical expenses and support in old age. Such an attitude prevent people from starting a business. But the less people identify work with employment, the easier it becomes to start a startup.

6. **Domestic market.**
   In the beginning a startup need to test its first product version on the local market. The United States offer one of the largest and richest markets in the world. In smaller countries, it won’t possibly work so well, while a startup has to sell

[49] http://yourstory.com/2015/09/patent-pills/ (02.07.2016)

[50] http://www.ey.com/GL/en/Services/Strategic-Growth-Markets/Center-for-Entrepreneurship-and-Innovation---Intellectual-property-for-startups (07.07.2016)

[51] http://techcrunch.com/2012/08/25/patents-are-worthwhile-for-startups-to-pursue-in-the-us-but-not-abroad/ (15.07.2016)

[52] http://www.forbes.com/sites/jasonnazar/2013/09/09/16-surprising-statistics-about-small-businesses/#14b9b7903078 (05.07.2016)

[53] http://www.gemconsortium.org/country-profile/122 (02.07.2016)

> internationally from the very first version of the product. Even in case of the EU (that might be seen as a large domestic market) some problems can appear, while the inhabitants still speak many different languages.[54]

Thus, there are many factors that made the United States home for more than one prosperous startup ecosystem. Available ways to finance a startup company, great universities and immigration policies that let in smart people, appropriate legal framework that can protect innovation but at the same time does not kill the initiative, large domestic market to test new ideas, as well as culture accepting startups - all these factors contributed to the development of clusters where startups happen. A country that wants startups will probably have to reproduce whatever makes these clusters form.

4.2 Factors contributing to startup ecosystem development in Lithuania

Baltic region has been drawing attention for quite a long time with Estonia as a leading startup hub. At the same time, processes happening in Lithuania may result in the Lithuanian start-ups ecosystem outrunning Estonian.

According to the VCA, Lithuania counts 422 startups that employ 2,466 people. The leading sectors include Productivity and Collaboration tools, E-commerce, Gaming, Hardware and SaaS solutions.[55]

Figure 7 shows that Lithuania is doing quite great in terms of the number of startups with funding rounds. In 2015 alone, 68 startups raised money, while the deal flow in Estonia counted 28 deals, in Latvia - 38. In terms of total investment attracted, Lithuania is still behind Estonia, but the figures are already comparable: 165 million EUR and 280 million EUR during 2007-2015 respectively.[56]

[54] http://paulgraham.com/america.html (01.07.2016)

[55] http://goaleurope.com/2016/06/01/lithuanian-startup-scene-is-catching-up-with-cee-leaders/ (18.07.2016)

[56] http://vca.lt/en/associated-members/we-have-start-ups-what-about-unicorns/ (20.07.2016)

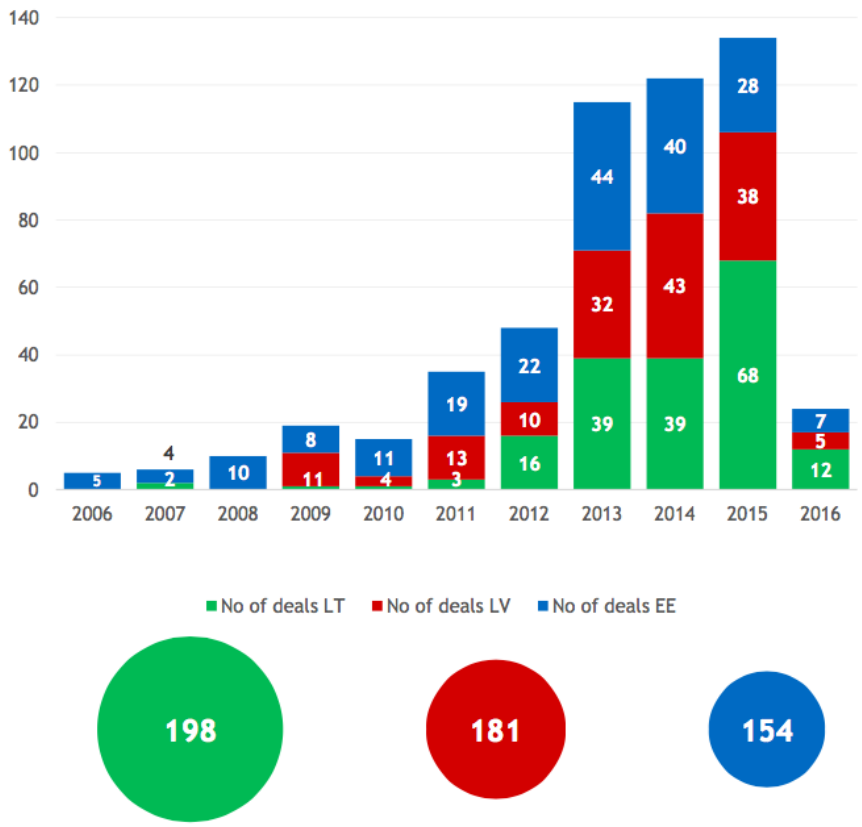

Figure 7: Number of deals in Baltic startup ecosystems, 2006 - 2015

Nevertheless, the number of investors in Lithuanian startups is growing steadily. In 2014 the total investments attracted by startups were three times higher than in 2013, when investors allocated 16 million EUR.[57]

The venture scene is dominated by foreign firms, which provided over 77% of the funding. Most active are Octopus Ventures, Accel Partners, imi, General Catalyst Partners, Kima Ventures, Insight Venture Partners, Karma Ventures, and the European Bank for Reconstruction and Development.[58]

There are two private venture capital funds - Nextury Ventures and Ltk Capital, as well as two startup accelerators providing starting capital and mentorship – Startup, run by Practica Capital and StartupHighway - one of the biggest startup accelerators in the Eastern Europe.[59]

[57] http://www.forbes.com/sites/alisoncoleman/2015/09/20/why-business-is-booming-in-the-baltics/#38276f956d47 (18.07.2016)

[58] http://goaleurope.com/2016/06/01/lithuanian-startup-scene-is-catching-up-with-cee-leaders/ (19.07.2016)

[59] http://practica.lt/en/news1/lithuanian+startup+ecosystem++pool+of+opportunities+for+foreign+and+local+startups+and+vcs/ (18.07.2016)

In addition, more than 100 events, meetups, hackathons and workshops are running annually. Among those are LOGIN, StartupWeekend Lithuania and SV2B which gather the most participants yearly. Besides this, Lithuania offers plenty of co-working places – Sunrise Valley, StartupHighway coworking pace, HUB Vilnius. Speaking of which, Vilnius is looking forward to opening up 900+ new working places in Vilnius Tech Park in 2016 and is considered to become the major technology hub for startups within ICT sector in Lithuania.[60]

It is worth mentioning, that Lithuania uses its potential for the development of the start-up market. Strategic position in Central Europe, geopolitical stability, its linguistic wealth and talent in the field of technology contribute to the development of start-up ecosystem.

According to Statista, 97% of working-age Lithuanians (aged 25-64) know at least one foreign language. English and Russian are most popular[61](See Apendix A-II).

Lithuania also achieved great results in terms of infrastructure development. Thus, The Ookla Net Index 2014 ranks Lithuania 5th in the world for the speed of Internet[62] and according to CNN, Vilnius, the capital city, is in the Top Ten of Smart Cities in the world.[63]

Developed infrastructure, favorable legislation and tax policy, low cost of living make Lithuania attractive for both startups and established companies looking for IT outsourcing or relocation. Take startup star Game Insight as an example, a mobile game publisher that recently moved from Moscow to Vilnius, followed by 15 other gaming companies.[64]

Reasons for rapid startup ecosystem development in Lithuania lay principally in the government commitment to improve business conditions for startup companies. During the past few years actions were taken in several directions:

1. **Access to venture capital**

JEREMIE initiative was funded in 2010 by the EU Structural Funds under the Operational Programme for Economic Growth 2007 - 2013. One part of the funds was used for establishing private equity and venture capital funds in Lithuania. These funds are managing 80 million EUR in total capital available to Lithuanian SMEs.[65] One of the aims

[60] http://www.ceedtech.eu/blog/an-inside-look-at-the-lithuanian-startup-ecosystem (19.07.2016)

[61] http://www.forbes.com/sites/tomaslaurinavicius/2016/01/31/bootstrap-in-lithuania/4/#68bbd60746fd (18.07.2016)

[62] http://www.geektime.com/2015/06/04/why-lithuania-is-punching-above-its-startup-weight/ (18.07.2016)

[63] http://edition.cnn.com/2014/12/18/business/smart-cities-next-generation/index.html (19.07.2016)

[64] http://www.geektime.com/2015/06/04/why-lithuania-is-punching-above-its-startup-weight/ (19.07.2016)

[65] http://goaleurope.com/2016/06/01/lithuanian-startup-scene-is-catching-up-with-cee-leaders/ (18.07.2016)

of these funds was to promote direct investment into Lithuanian start-ups. Their market entry directly and indirectly (through creating a network of business angels, who are interested in investing in high-tech companies, and investing with them) promotes the development of a venture capital market.

This factor was also very important for the legalization of the Lithuanian start-up market on a global scale. JEREMIE has become a somewhat seal of quality, certifying that the ecosystem was established and operates under the normal rules of the game. This fact was the main driver of interest by foreign venture capital funds.[66]

2. Organization of entrepreneurial events

Lithuanian entrepreneurial environment is actively supported and promoted by government institutions - business promoting agency Enterprise Lithuania together with one-stop shop information for startups StartupLithuania, foreign investment consultant Invest Lithuania and The agency for Science, Innovation and Technology MITA.[67]

Enterprise Lithuania, for example, had bounded bridges with Silicon Valley as well as other international key startup destinations to attract further investment and exchange ideas. In 2013, during the biggest tech conference in the region - LOGIN, the Startup Fair was organized for the first time. The best regional startups had an opportunity to pitch Silicon Valley and European investors.[68]

3. Attraction of startup investments

According to TRINITI, an alliance of Baltic commercial law firms, there are several reasons why Lithuania is attractive for startup investment transactions. First of all, *advanced regulation based on EU law, quickly improving business legal environment and protection of investors' rights* makes Lithuania investors and entrepreneurs friendly. A company in Lithuania can be established in approximately 3 days for less than 58 EUR and with minimum required authorized capital of just 2,500 EUR.[69]

Law taxation for small companies as well as deduction of R&D costs has a great impact on encouraging the transactions. Thus, small enterprises with an annual income not exceeding 300,000 EUR and an average number of employees not exceeding 10 are

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[66] http://vca.lt/en/associated-members/we-have-start-ups-what-about-unicorns/ (20.07.2016)

[67] http://practica.lt/en/news1/lithuanian+startup+ecosystem++pool+of+opportunities+for+foreign+and+local+startups+and+vcs/ (21.07.2016)

[68] http://www.forbes.com/sites/tomaslaurinavicius/2016/01/31/bootstrap-in-lithuania/4/#68bbd60746fd (18.07.2016)

[69] http://www.doingbusiness.org. (22.07.2016)

subject to just a 5% profit tax rate. Lithuania also offers a triple deduction of R&D costs: the amount deducted from the company's annual profit equals to 300% of R&D costs for the tax period during which they were incurred. Furthermore, super-accelerated depreciation is applicable for the fixed assets used in carrying out the R&D.[70]

Other reasons attracting investments *are transparency of business environment* guaranteed by Lithuanian registry system and *extremely fast commercial litigation process*.[71] On average, it will take just 3 months to resolve a commercial case in Lithuania (while, for example, in Sweden, Germany or Denmark it takes half a year).[72]

4. Progressive immigrant policy

The adoption of startup visas and reforms in the Blue Card procedures, aimed at facilitating the process of getting residence and work permits for innovative teams from non-EU countries, made Lithuania an attractive destination for tech talent from Belarus, Ukraine and Russia. The new law implies that startups are able to receive work permits for one year with possible extension for another year. After these two years expire, the head of the company or shareholders are eligible to apply for a temporary residence permit.[73]

In brief, Lithuania has delivered significant results in terms of business promotion and rapid startup ecosystem's development. Proficiency in English, one of the fastest internet connections in Europe, intelligent workforce, EU location, strong contract enforcement, high ratings in the ease of doing business, triple deduction of R&D costs, available venture capital and mentorship, and commitment from the government to further improving business conditions are the factors that make Lithuania attractive both for startups or established companies looking for IT outsourcing or BPO location.

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[70] http://startuphighway.com/wp-content/uploads/2015/05/Lithuanian_startup_ecosystem.pdf (23.07.2016)

[71] http://practica.lt/en/news1/lithuanian+startup+ecosystem++pool+of+opportunities+for+foreign+and+local+startups+and+vcs/ (23.07.2016)

[72] http://ec.europa.eu/justice/effective-justice/åles/justice_scoreboard_2015_en.pdf (18.07.2016)

[73] http://goaleurope.com/2016/06/01/lithuanian-startup-scene-is-catching-up-with-cee-leaders/ (20.07.2016)

5 Belarus: prospects and challenges of startup ecosystem

Further development of Belarusian startup ecosystem may significantly contribute to Belarusian economy. Startups bring innovation and create new working places, increase foreign direct investment and export earnings from information and computer services, enhance country's image. Moreover, the importance of startup support especially in IT sector is underpinned by the following factors. Firstly, IT sector in Belarus is growing rapidly: during the past five years its volume has tripled, while export earnings from computer and information services have increased more than 700% between 2000 and 2014.[74] Secondly, the external public debt of the republic (currently more than 40 billion USD, 54% of GDP) makes Belarusian export, including IT services, even more important for bringing the economy into balance.[75] Thirdly, few natural resources stipulates the need of intellectual potential growth, including information technology, to achieve a higher level of economic development.

5.1 The contribution of IT sector to national economy

In the past few years IT sector in Belarus has received strong governmental support. The Decree of the President of the Republic of Belarus № 234 of May 3, 2001 "On State Support of Elaboration and Export of Informational Technology" defines conditions for the development of national IT industry and lays the basics for the state policy in this sphere.[76] According to the Decree № 234 an organizational infrastructure for IT sector was created Scientific and Technological Association "National Infopark". "Infopark" unites more than 60 organizations (more than 11,000 employees) engaged in the development of software solutions, services and products. Further contribution to IT sector development was made by the enforcement of the Decree of the President of the Republic of Belarus №12 of September 22, 2005 "On the Park of High Technologies".[77]

[74] http://www.nbrb.by/statistics/BalPay/ (01.08.2016)

[75] http://www.nbrb.by/statistics/externaldebt (01.08.2016)

[76] http://www.intuИТ.ru/studies/courses/532/388/lecture/9001 (24.07.2016)

[77] http://pravo.by/main.aspx?guid=3871&p0=Pd0500012 (25.07.2016)

In general, there are about 940 companies working in computer and information services, 137 of them are residents of the Park of High Technologies. Belarusian IT market is relatively young - more than 50% of the companies are less than 5 years. 31% of the companies are “experts” that operate on the market 6-10 years. Market pioneers (more than 11 years) comprise 17% of the companies.[78]

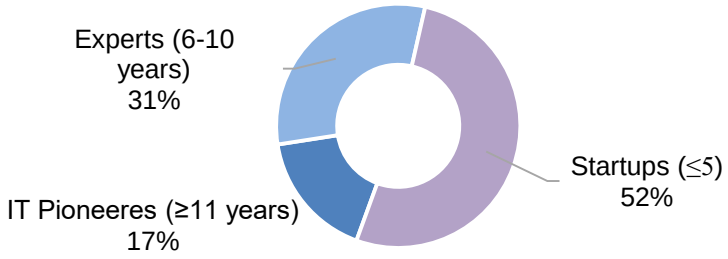

Figure 8: Age of companies in the Park of High Technologies, 2014 [79]

More than half of the Belarusian IT companies use foreign capital (main investors: the U.S., Germany, Israel, the U.K. and Russia). Most common forms of these enterprises are joint venture and foreign company. At the same time, 46% of the companies found the financing sources solely in the Republic.[80]

Special legal regime in the Park of High Technologies contributed to the dynamic development of software engineering in the country. Thus, computer and information services are the second important service article in the current account of the balance of payments (after transportation services).[81]

Exports of computer services in 2014 made up 701,7 million USD - 70% of the total volume of IT products produced in Belarus. In 2014 ccurrent account surplus in computer and information services were 602,3 million USD, 6000 times its value in 2000. It is worth mentioning that IT share in the total export of services has increased considerably (from 0,4 % in 2000 to 9 % in 2014).[82]

[78] http://companies.dev.by/ (24.07.2016)

[79] http://companies.dev.by/ (24.07.2016)

[80] http://investinbelarus.by/docs/-21948.pdf (24.07.2016)

[81] http://www.nbrb.by/statistics/BalPay/ (25.07.2016)

[82] http://www.nbrb.by/statistics/BalPay/ (25.07.2016)

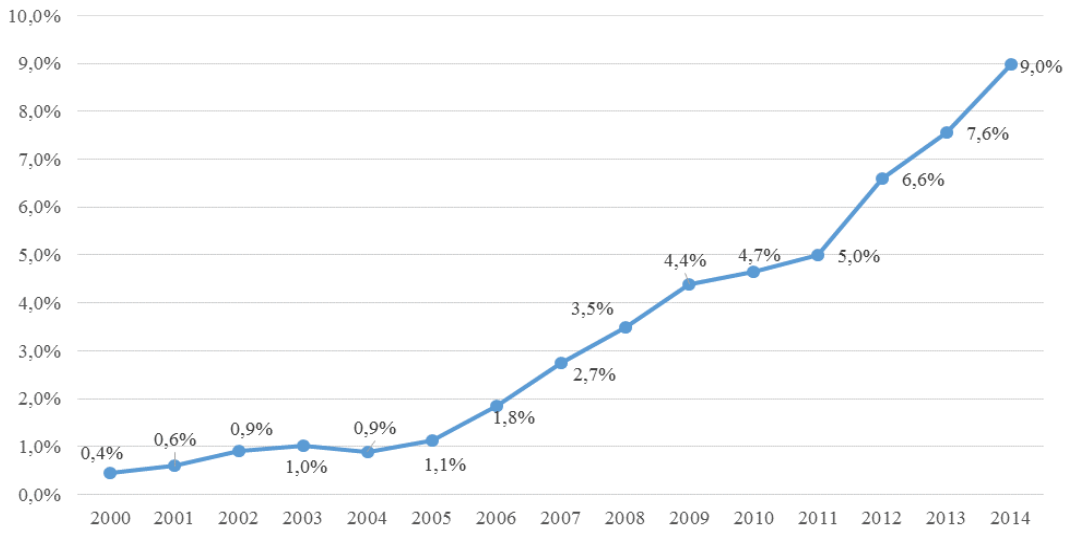

Figure 9: Exports of computer and information services in the total exports of services in Belarus, 2000 - 2014 [83]

Belarus managed to outrun such recognized world leaders in the IT sphere as India and the United States in computer services exports in 2013. Its amount per capita came to 60 USD, while in India it equaled 41 USD and in the United States - 36 USD.[84]

In 2014 the domestic consumption of IT services in the Republic was only about 80 million USD (not including products developed by companies for their own use). Government agencies, banks and telecom operators represent the main consumers. Thus, the statistics makes export orientation of this sector clear. During the last years, the geography of international customers has changed considerably. Nowadays they are companies from the EU (44% of IT-services export), the U.S. and Canada (40%) that buy most, as shown in Figure 10.[85]

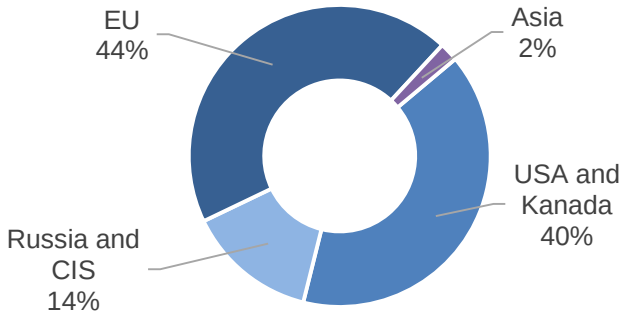

Figure 10: International Consumers of IT-services produced in PHT, 2013[86]

[83] http://www.nbrb.by/statistics/BalPay/ (25.07.2016)

[84] http://www.park.by/post-819/ (24.07.2016)

[85] http://investinbelarus.by/docs/IT.pdf (24.07.2016)

[86] http://investinbelarus.by/docs/-21948.pdf (24.07.2016)

Thus, The Republic of Belarus is a young but dynamic participant of the global IT market, with export earnings from computer and information services growing year by year.

5.2 Competitive advantages of Belarusian IT sector

It is important to point out the main competitive advantages that help to develop IT startups in Belarus:

1. **Business culture**.
   Thank to geographic proximity to Europe, Belarusian business culture has a lot in common with European way of doing business. That can help to find partners or investors for nascent business.

2. **High level of education**.
   Technical education in Belarus based on Soviet system meets recognition in the word. This contributes to the fact that Belarusian IT specialists are among the most qualified in the region. There are 54 universities that prepare annually about 16,000 young ICT professionals. Over the past 5 years (2010 - 2014) the number of IT specialists in Belarus has increased by 85,7%. However, the demand for IT specialists outpaces 3 times the supply.[87]

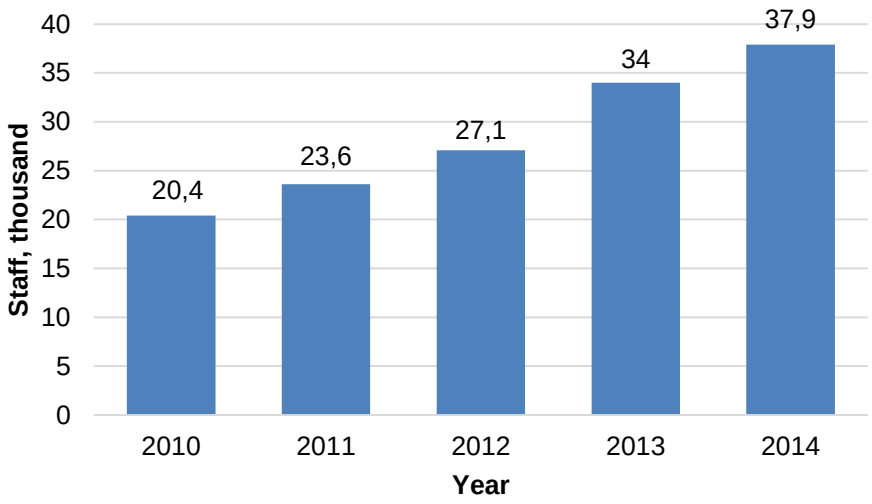

Figure 11: Average number employed in IT sector in Belarus[88]

[87] http://atom.belta.by/ru/news_belta/view/news_belta/view/v-belarusi-spros-na-it-spetsialistov-vtroe-prevyshaet-predlozhenie-4440/t_id/1 (28.07.2016)

[88] http://companies.dev.by/ (28.07.2016)

3. **Tax concessions**.
   Due to the legislative initiative of the Belarusian government, IT companies are exempt from all corporate taxes, including VAT, profit, and real estate and land taxes. Individual income tax has a fixed rate of 9% for the employees of PHT companies. All these factors may contribute positively to reinvestment.

Exempt from:	Income tax and VAT; Land tax (under certain conditions)
	Real estate tax
	Offshore duties
	All corporate taxes
	Customs duties
	Compulsory sale of foreign currency from operating profit
Rent rate:	Reduced by 50%
Individual income tax:	9% (generally - 13%)
Income tax rate for foreign legal entities:	5% (generally- 10-15%), in case of no other preferential treatment stipulated by international treaties of the Republic of Belarus

Table 3: Tax concessions for PHT residents in Belarus[89]

4. **Wage rates**.
   In Belarus IT sector wages exceed by 3-4 times the national average salary. According to dev.by, the average wages in the IT sector in January 2015 was 1663 USD. It is one of the highest in the country. The dynamic is shown in Figure 12.

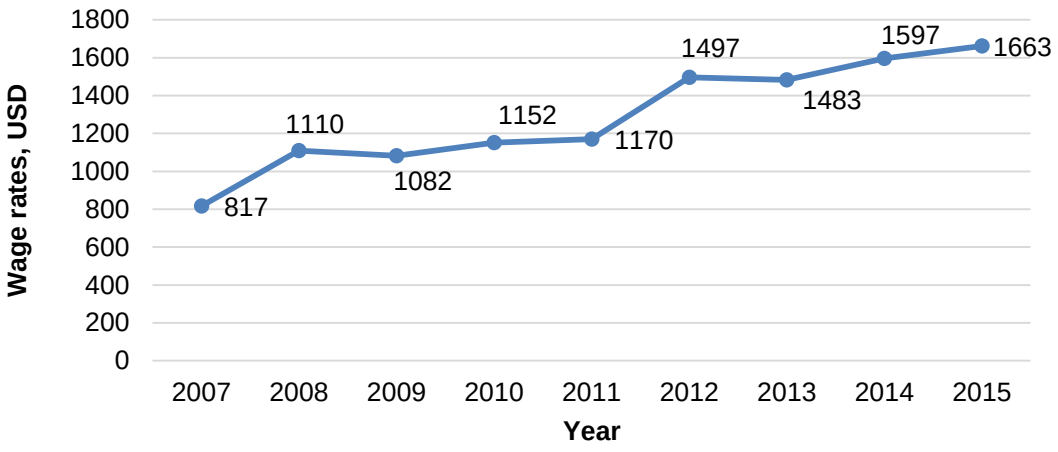

Figure 12: The dynamics of average wages in Belarussian IT sector, 2007-2015[90]

[89] http://investinbelarus.by/docs/-21948.pdf (28.07.2016)

[90] http://salaries.dev.by/ (29.07.2016)

However, the average wage rate in Belarusian IT sector is much lower than in other countries, what turned Belarus into an outsourcing platform. Table 3 shows that Central and Eastern Europe is among the cheapest regions for IT outsourcing along with China and India - hourly rates are 3,5-4 times lower than in the Scandinavian countries or in the United States. According to Central and Eastern Europe Outsourcing Review 2010 Belarus is one of the cheapest countries for outsourcing in CEE region.[91]

	India	*Russia*	*CEE*	*Scandinavian countries*	*China*	*USA*	*Latin America*
Software development	20-32	37	22	85	25	75	36
Testing and quality control	15-25	-	18	65	18	50	26
Web-design	18-30	32	20	70	20	75	30
Mobile application development	20-25	-	20	85	20	80	30

Table 4: Hourly rates for IT outsourcing in the world in 2011, USD [92]

In 2013 and 2014 more than 90% of Belarusian IT companies were engaged in software development on a by-order basis, what confirms the dominance of outsourcing orientation of IT sector in the Republic.[93]

This situation also explains the increasing export revenues in this sphere, but at the same time, the development of IT startup initiatives, that create products with high added value, can be far more beneficial than outsourcing. Taking into account the fact that in Belarus the demand for IT specialists outpaces 3 times the supply, wages in IT sector are likely to continue growing, that can make Belarus not so appealing in regards of outsourcing. While only 32,7% of the companies claim to be purely “service”[94], Belarusian IT sector has good perspectives on developing its own startup ecosystem.

[91] http://ceeoa.org/assets/Uploads/CEEITOReview2010.final.pdf (26.07.2016)

[92] http://investinbelarus.by/docs/-21948.pdf (29.07.2016)

[93] http://investinbelarus.by/docs/-21948.pdf (29.07.2016)

[94] http://investinbelarus.by/docs/-21948.pdf (29.07.2016)

5.3 Challenges of Belarusian startup ecosystem

There are several major problems Belarusian ecosystem face:

1. **Lack of venture capital.**
   Young Belarusian startup ecosystem needs qualified investors to finance companies at different development stages. In a view of this some initiatives have been already launched. The first Belarusian startup support centre has arranged several successful event programs (Startup Weekend, Invest Weekend) that helped startup companies to find financing. At the same time, according to Nikolai Lyahovsky, Executive Director of AVI Investment Company, in 2011 only 20 people considered themselves as business angels, that is definitely not enough for the country with almost 10 million population. “In my experience, it is necessary to present a project to at least 50 investors, 5-7 of which may become interested and only 1-2 will be ready to invest. Ideally, Belarus needs at least 1,000 business angels”, as Nikolai Lyahovsky.[95] Furthermore, there is still no venture capital funds in the Republic.

2. **Lack of entrepreneurial culture and education.**
   Unfortunately, Belarus does not possess over developed entrepreneurial culture (perhaps, a Soviet-era holdover). There are not a lot of managers that can commercialise innovative ideas. Belarusian research institutions do not look for financing opportunities in most cases, and stay indifferent to practical realisation of their projects. Young go-aheads often have a lack of experience and education. Quite often, they cannot pitch their ideas effectively and fail to develop a realistic business plan. Lack of business education programs in the Republic takes a toll on the situation. However, Belarus has currently started moving in this direction. BEL.BIZ, a group of companies with global perspectives developing Startup and entrepreneurship ecosystem in Belarus, includes BEL.BIZ, online content provider for business in Belarus, IMAGURU Startup Hub and TechMinsk Accelerator. BEL.BIZ is the host of the Global Entrepreneurship Week in Belarus, and the only certified company in Eastern Europe, offering world class IFC’s trademark training program Business Edge. IMAGURU Startup Hub organizes professional conferences and startup events, where professionals share their best practices, learn about the latest trends and achievements in entrepreneurship and innovations. Moreover, Imaguru represents the first co-working space in Belarus.[96] TechMinsk is the first International Startup Accelerator in Belarus.

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[95] http://avinvest.by/novosti/problemyi-i-tendentsii-razvitiya-venchurnoy-deyatelnosti-v-belarusi/ (04.08.2016)

[96] http://imaguru.co/en/about (05.08.2016)

3. **Lack of domestic demand.**
   Weak domestic demand does not encourage IT sector companies to innovate their products or search for new solutions. Outsourcing does not generate knowledge needed to create products with higher added value. While national market is not large enough, it is practically impossible to grow a billion here. Therefore, Belarusian startups should deal with internalisation from the very beginning.

4. **Deficiencies in legislation: corporate law and intellectual property.**
   Belarusian corporate law is not very flexible. While contributing 50-100 thousand USD an investor is most likely to look for 50-75% company's share. The reason for such a situation is that the rights of minority shareholders are poorly protected. Investors are not interested in little share because of the high risk of failure of unexperienced founders. In comparison with the U.S. an investor receives 5-15% for such a sum. In this case, founders have more freedom and are much more motivated in their companies' development.[97]

   Furthermore, Belarusian legislation does not have provisions concerning shareholders' agreement that can establish additional responsibilities between founders and investors (for example, an agreement about obligatory staying in the project within a certain period of time and protecting funds withdrawal). Another trend in foreign legislation is a convertible debt. When a startup company reaches certain indicators, an investor can convert the loan into shares. This is beneficial to both investors and founders, while investors decrease their risks and founders escape difficult evaluation procedure of pre-investment value of the company – when a company represents an idea only, it is difficult to convince investors that it is worth not only 100 thousand USD, but 1 million.[98]

   Another problem marked by World Bank after analysing Information and Communication Technology sector in 2014 is connected with legal protection of intellectual property. In particular, 80% of all software used in Belarus is unlicensed. Current legislation does not meet world best practices and is not able to protect effectively intellectual property in Belarus. Its provisions were developed in 1996 and since then no changes have been made. In 2014 the Council of Ministers has made a new draft on intellectual property rights developed by the Belarus National Center of Intellectual Property Rights in cooperation with Infopark. But till now no discussions have started.

[97] http://avinvest.by/novosti/problemyi-i-tendentsii-razvitiya-venchurnoy-deyatelnosti-v-belarusi/ (04.08.2016)

[98] http://avinvest.by/novosti/problemyi-i-tendentsii-razvitiya-venchurnoy-deyatelnosti-v-belarusi/ (04.08.2016)

Unfortunately, Belarusian legislation does not provide non-compete or non-solicitation agreements.

Such factors as *unstable economic situation*, *shortage of qualified IT-specialists, low English skill level among programmers and developers* make these matters worse.

5.4 Recomendations for startup ecosystem development

Taking into consideration the problems mentioned above and paying close attention to the measures taken in the countries with mature or rapidly developing startup ecosystem (such as the United States and Lithuania) Belarus may succeed in replicating a flourishing ecosystem as well. It is possible to mark five major steps in creating a working startup environment: 1. Create awareness. 2. Build a startup environment. 3. Protect startup development. 4. Attract companies to set up locally. 5. Draw capital locally and from abroad.

Starting with education the public about what a career in startups can look like makes it possible to create a pool of risk taking people willing to start their own business. Mentorship and available co-working places are a necessity for developing new progressive ideas. Moreover, legal rights of new entrepreneurs are to be protected to guarantee further development of startup companies. Attracting successful corporations from other counties may provide influence, capital and experience. Financing sources should be available at each startup development stage.

Each step includes real actions and policy decisions that spur startup ecosystem development. Here are some proposals how to stimulate Belarusian ecosystem:

1. **Create awareness**

   The first step to be taken is to *educate students and community to run their own business*. This may include projects that bring entrepreneurs together to give presentations to the local community members about how to start their own companies. It is important to *organize startup events* not only for professionals but for students as well. Universities should play an important role in startup movement by organizing meeting with successful businesspeople or workshops (for example, “how to pitch your ideas”) for students. All these measures will help to identify work less with employment and promote entrepreneurial culture.

   After that, *more attention to startups in Belarusian media* is needed. In comparison with the U.S. where the image of a successful businessman is cultivated with the help of movies and news, Belarusian entrepreneurs have to deal with different information environment. In my opinion, it is necessary to pay heed to the *branding*

of Belarusian IT cluster. So that mores students will be eager to connect their live with innovative technology.

While Belarusian startups (like Lithuanian) have to deal with internalization from the very beginning, it is important to understand, that *improving English proficiency* is a key determiner of economic competitiveness. Ample evidence shows that early childhood education in languages is vastly superior to education in teenage and early adult years. [99]The Belarusian system should take cues from the most successful European education systems when it comes to English and begin compulsory English education at the age of 6.

Not only students and communities should “create awareness”, but the state itself. It is highly important to *define a startup and a startup event in legal documents*, so that the government will be able to back startups in form of organizational, informational and financial support. If there are no such definitions in state administration system, it is beyond its legal pale.

2. Build a startup environment

Building a startup environment concerns the *creation of business incubators, business accelerators, platforms, organizing competitions* and other startup events by example of American Y Combinator or StartupLithuania. By participating in such organizations, a startup founder can find mentorship, co-working pace, financing or get acquainted with future investors. In addition to all mentioned above, these organizations generate knowledge how to differentiate good ideas and how to bring them to the market, what is extremely important for the nourishing startup ecosystem.

While there is still only one business accelerator in the republic, measures are to be taken for their establishment. The first way for their creation is a governmental initiative. The second way - a big company provides money for accelerator development, and an accelerator, in its turn, works for this company. Nowadays, there are more than 40 big corporate accelerators in Europe. Any serious company opens its accelerator, while understanding of digital world is essential for its survival.[100]

[99] http://startupyard.com/7-things-the-government-could-do-for-the-startup-ecosystem/ (05.08.2016)

[100] http://startuplife.by/tips-belarus.html (07.08.2016)

Talking about the availability of co-working places, I cannot but propose the following: Belarusian government may *offer startup companies idle premises of unprofitable enterprises.*

Belarusian government should continue *developing infrastructure for high speed Internet*. As of May 2015, Ookla's Household Download Net Index ranked Belarus 52nd of 200 countries, with an average broadband download speed of 19,85 Mbps. [101] At the same time, Lithuania is in the top 7 globally with 58,43 Mbps.[102] This example shows that there is still much room for improvement.

3. Protect startup development

As it was mentioned before, an investor in a Belarusian startup is more likely to have the controlling interest, what make founders constrained by investors in decision-making. To change the situation, *the rights of minority shareholders are to be better protected*. More patterns should appear when investors receive 5-15% of company's share, so that a founder may sell shares during following funding rounds and do not lose control over the company even after the second round of financing. This will make founders motivated and interested in the successful development of their company.

Another proposal concerns *enacting of convertible debt* and certain provisions in shareholders' agreement, that can *establish additional responsibilities between founders and investors*, for example, an agreement about obligatory staying in the project within a certain period of time and protecting funds withdrawal.[103]

The provisions of *current legislation concerning the protection of intellectual property should be reviewed* and a new draft is adopted. Entrepreneurs with high-growth startups should have patents on their ideas while it can attract investors or provide an additional opportunity to generate revenue from licensing.[104] Belarus may learn from the U.S. system and adopt lows concerning business method and software patents, confidentiality agreements and trade secret protection.

Furthermore, to protect an employer from a competition from (ex-) employees,

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[101] https://freedomhouse.org/report/freedom-net/2015/Belarus (04.08.2016)

[102] http://news.abs-cbn.com/business/05/19/15/guess-which-asian-country-has-slower-internet-philippines (07.08.2016)

[103] http://avinvest.by/novosti/problemyi-i-tendentsii-razvitiya-venchurnoy-deyatelnosti-v-belarusi/ (08.08.2016)

[104] http://www.ey.com/GL/en/Services/Strategic-Growth-Markets/Center-for-Entrepreneurship-and-Innovation---Intellectual-property-for-startups (04.08.2016)

Belarusian legislation should also provide *non-compete u non-solicitation agreements*.

4. Attract companies to set up locally

Another key variable in creating the environment is to attract corporate partners. Enterprise Lithuania created the Vilnius tech-park and coaxed foreign companies to move there with *affordable office space and tax breaks*. Within this technology park, the Lithuanian accelerator Startup Highway and the technology center of Barclays launched a startup program designed to promote and collaborate on financial technology.[105]

The same may be organized within the Park of High Technologies in Belarus, since it does not provide offices and companies either have to deal with construction or look for affordable premises by themselves. Launching a program, that will help residents to collaborate with each other in a specific area (for example, gaming), may bear fruit as well.

At the same time, practices, that foster innovative activity, are applied only to the limited number of participants, namely to the residents of the Park of High Technologies and some other scientific parks. This policy caused the formation of privileged enclaves. Benefits and privileges defined in these structures should be spread on the whole economy. This can improve the starting conditions for all innovation-oriented businesses.[106]

It is necessary to improve immigration policy in order new companies and educated workforce come to Belarus with new ideas. This mainly concerns Lithuanians and Latvians, that have to deal with long and costly (150 EUR for a long-stay visa) procedures.[107] Belarus should not be a supplier of developers and programmers to other startup hubs, but transform into an attractive country for talents from all over the world. The U.S. is now discussing so called "*Start-up Visa"*, Lithuania does already have it. Belarus should consider it too.

5. Draw capital locally and from abroad

Startups depend on and thrive on the investments at different stages of their development. The government can be a good resource for initial funding. Usually, the developing markets (Central and Eastern European countries, the Middle East, Asia, Central and South Americas) follow the principle of "fake it till you make it"– the markets are artificially stimulated with national funds until they have gained

[105] https://www.linkedin.com/pulse/create-startup-state-governments-can-learn-from-baltics-kurt-davis?forceNoSplash=true (09.08.2016)

[106] http://startupyard.com/7-things-the-government-could-do-for-the-startup-ecosystem/ (05.08.2016)

[107] http://mfa.gov.by/upload/123/1.pdf (11.08.2016)

speed.[108] For example, the *creation of an early stage fund* for supporting startup by the lack of financing may be a way out.

At the same time, *government backed investment matching programs* like JEREMIE may be even more useful. If the government provide startups with capital, it is worth using qualified investors for its distribution. While if the government decide which startups deserve investment capital, that may produce companies that get investments because they're good at convincing the government to give it to them, not convincing customers to buy from them or real investors to invest in them. Instead, the government should support qualified investors by giving them incentives to invest, including matching funds on all their startup investments.

To push new investors and high net worth people to invest in technology, startups should be classed as a special investment category, and *investors should be allowed to deduct their investments in startups from capital gains taxes*.[109]

Early stage companies may also benefit from *crowdfunding*. This initiative has to be discussed and legally adopted not only in the U.S. but in Belarus as well.

But government capital and crowdfunding is not enough to ignite a startup ecosystem. To allure capital, Belarus may create energy by *marketing its startups to the world*. For example, Belarus may invite successful startups to tell their stories to the local communities and also spread the word about their startups globally. While there is not a lot of business angels in the republic, seminars with successful investors from other countries may be the way for our entrepreneurs to adopt the best practices and to grow in the course of time more Belarusian business angels and venture funds. One of the good examples: Enterprise Lithuania invited Silicon Valley to the Baltics by hosting the SV2Baltics conference. Over 3,000 people attended to hear from companies including Uber, HP, Yelp, Facebook, and 500 startups.[110]

Moreover, setting up a *consultancy for foreign investors*, a platform, that will cover Belarusian startup scene and help with procedures, may make Belarusian IT-sector more investment attractive.

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[108] http://vca.lt/en/associated-members/we-have-start-ups-what-about-unicorns/ (10.08.2016)

[109] http://startupyard.com/7-things-the-government-could-do-for-the-startup-ecosystem/ (10.08.2016)

[110] https://www.linkedin.com/pulse/create-startup-state-governments-can-learn-from-baltics-kurt-davis?forceNoSplash=true (10.08.2016)

6 Summary

The aim of this thesis was to prove the expediency of startup support and to develop practical recommendations for startup ecosystem development for Belarusian government based on the analysis of successful practices in the U.S. and Lithuania.

It was necessary to cover the essence of a “startup company” and a “startup ecosystem” first. Despite there is no common understanding of a term “startup”, largely a young company designed to search for a repeatable and scalable business model will be seen as a startup. The appearance of such companies is easier within a startup ecosystem, which is formed by people, startups and organizations in a physical or virtual location. Each startup undergoes four major development stages – Discovery, Validation, Efficiency and Scale – and need investments at each stage. Usually, a startup receives financing not only from traditional sources like banks, but also from FFF (family, friends, fools), business angels, venture capital funds, business incubators and accelerators.

The positive effect that startups have on net job creation significantly outweigh the contribution of existing firms, what makes clear, that the key solution which accounts for higher employment rates lies on creating favourable conditions for startup foundation, developing support programs and encouraging people to become entrepreneurs. But not only higher employment rate is the advantage of a good-running startup ecosystem. Each of the participants gets their own benefits. These include tax revenues for public officials; a larger and more profitable loan portfolio for banks; knowledge generation, reputation, and endowments from donations for universities. For entrepreneurs and investors the advantage is wealth creation. For corporations, innovation, product acquisition, talent retention, and supply change development may be the benefits.

Nevertheless, the development of startup ecosystem depends on country’s preconditions and government commitment to further improving business conditions. Thus, available ways to finance a startup company, great universities and immigration policies that let in smart people, appropriate legal framework that can protect innovation but at the same time does not kill the initiative, large domestic market to test new ideas, as well as culture accepting startups – made the United States the home for most prosperous clusters, where startups happen. A country that wants startups will probably have to reproduce this model.

So, for example, Lithuania has delivered significant results in terms of business promotion and rapid startup ecosystem’s development. Proficiency in English, one of the fastest internet connections in Europe, intelligent workforce, EU location, strong contract enforcement, high ratings in the ease of doing business, triple deduction of R&D costs, available venture capital and mentorship, and government support on different levels are the factors that make Lithuania attractive both for startups or established companies looking for IT outsourcing and BPO location.

The Republic of Belarus is a young but dynamic participant in the global IT market, with export earnings from computer and information services growing annually. It possesses over a number of advantages that help to develop IT startups: special business culture, high level of technical education, tax concessions for PHT participants and high wage rates in IT sector. Outsourcing orientation of IT sector should be changed towards the development of Belarusian startup ideas, what will contribute positively to the national economy.

However, there are several main problems that undermine the development of IT startups in Belarus: lack of venture capital, lack of entrepreneurial culture and education, lack of domestic demand, corporate law inflexibility, weak intellectual property protection, unstable economic situation, shortage of qualified IT specialists, low English proficiency.

Taking into account startup support policies in the U.S. and Lithuania as well as analyzing challenges that Belarusian IT sector faces, following steps for creating a working startup ecosystem are recommended:

1. Create awareness.
2. Build a startup environment.
3. Protect startup development.
4. Attract companies to set up locally.
5. Draw capital locally and from abroad.

Each step includes real actions and policy decisions that spur startup ecosystem development. Thus, it is necessary to start with the education of students and communities about how to start their own business, develop their entrepreneurial skills and English proficiency and define “startup” and “startup event” in legal documents, so that governmental measures concerning directly startup companies can be officially implemented. Next, Building a startup environment concerns the creation of business incubators, business accelerators, platforms, organizing competitions and other startup events. All types of this organizations or events should be backed by government, for example by offering startup companies idle premises of unprofitable enterprises. Further development of high speed Internet infrastructure is important as well. Moreover, the rights of new founders should be protected; therefore it is necessary to revise provision of corporate law and intellectual property rights. Another key variable in creating startup ecosystem is attracting corporate partners. This can be implemented by affordable office space, tax breaks for all innovative businesses and favorable immigration policy. Finally, drawing capital may be seen as the most important part of building Belarusian startup ecosystem. Capital can be drawn locally, for example, with the help of crowdfunding platforms or government initiatives, or from abroad by branding Belarusian IT cluster and creating incentives for venture capital investors.

List of references

ABS-CBN News (2015) Unknown Author: *Guess which Asian country has slower Internet than PH?* news.abs-cbn.com, 2015. http://news.abs-cbn.com/business/05/19/15/guess-which-asian-country-has-slower-internet-philippines

belarus-economy.by (2015) Unknown Author: *Стартап- движение для успешного бизнеса*. economy.gov.by, 2015. http://www.economy.gov.by/publfiles/001464_984764.pdf

Belta (2014) Unknown Author: *В Беларуси спрос на ИТ-специалистов втрое превышает предложение*. belta.by, 2014. http://atom.belta.by/ru/news_belta/view/news_belta/view/v-belarusi-spros-na-it-spetsialistov-vtroe-prevyshaet-predlozhenie-4440/t_id/1

Blakesley (2016) Blakesley, Stephen: *Four Stages of Startup Development*. evancarmichael.com, 2016. http://www.evancarmichael.com/library/stephen-blakesley/Four-Stages-of-Startup-Development.html

Blank (2012) Blank, Steve: *Search versus Execute*. steveblank.com, 2012. https://steveblank.com/2012/03/05/search-versus-execute/

businessdictionary.com (2016) Unknown Author: *Bootsrtapping.* businessdictionary.com,2016. http://www.businessdictionary.com/definition/bootstrapping.html

CEED Tech Unknown Author: *An Inside Look at the Lithuanian Startup Ecosystem.* ceedtech.eu, 2015.

(2015) http://www.ceedtech.eu/blog/an-inside-look-at-the-lithuanian-startup-ecosystem

CEEOA (2010) Maznyuk, Viktor, et al*: Central and Eastern Europe IT Outsourcing Review 2010.*
ceeoa.org, 2010.
http://ceeoa.org/assets/Uploads/CEEITOReview2010.final.pdf

CNN (2014) Monks, Kieron: *Wire the desert: The next generation of smart cities*.
cnn.com, 2014.
http://edition.cnn.com/2014/12/18/business/smart-cities-next-generation/index.html

COECON (2015) Henton, Doug, et al: *The Silicon Valley Competitiveness and Innovation Project's report on Silicon Valley*.
Collaborative Economics, 2015.
http://graphics8.nytimes.com/packages/pdf/technology/SVCIP_2015_PDFfinal.pdf

Coleman (2015) Coleman, Alison: *Why Business Is Booming In The Baltics.*
Forbes online, 2015.
http://www.forbes.com/sites/alisoncoleman/2015/09/20/why-business-is-booming-in-the-baltics/#27657dda6d47

Compass.co (2012) Marmer, Max, et al: *Startup Genome Report 2012*.
Compass.co, 2012.
https://s3.amazonaws.com/startupcompass-public/StartupGenomeReport1_Why_Startups_Succeed_v2.pdf

Compass.co (2015) Unknown Author: *The Global Startup Ecosystem Report 2015.*
businesslocationcenter.de, 2015.
http://www.businesslocationcenter.de/imperia/md/blc/service/download/content/the_global_startup_ecosystem_report_2015.pdf

CVR (2014) Sohl, Jeffrey: *The Angel Investor Market in 2013: a Return to Seed Investing*.
Center for Venture Research, 2014.
http://paulcollege.unh.edu/sites/paulcollege.unh.edu/files/2013%20Analysis%20Report%20FINAL.pdf

Davis (2015) Davis, Kurt: *What US State Governments can learn from Estonia, Lithuania, Finland*.
Linkedin.com, 2015.
https://www.linkedin.com/pulse/create-startup-state-governments-can-learn-from-baltics-kurt-davis?forceNoSplash=true

Deeb (2014) Deeb, George: *Is a Startup Incubator or Accelerator Rght for You*.
Forbes online, 2014
http://www.forbes.com/sites/georgedeeb/2014/08/28/is-a-startup-incubator-or-accelerator-right-for-you/#532ddb1a3386

dev.by (2016) Unknown Author: *ИТ в Беларуси*.
dev.by, 2016.
https://companies.dev.by/

dev.by (2016) Unknown Author: *Зарплата в ИТ*.
dev.by, 2016.
https://salaries.dev.by/

Dylenok (2014) Dylenok, Julia: *Belarus is Ahead of India and the USA in Computer Services Exports per Capita.*
park.by, 2014.
http://www.park.by/post-819?lng=en

European Commission (2015) Unknown Author*: The 2015 EU Justice Scoreboard*.
European Commission, 2015
http://ec.europa.eu/justice/effective-justice/åles/justice_scoreboard_2015_en.pdf

Fallon Taylor (2015)r — Fallon Taylor, Nicole: *14 Creative Financing Methods for Startups*. Business News Daily, 2015. http://www.businessnewsdaily.com/1733-small-business-financing-options-.html

Freedom House (2015) — Unknown Author: *Belarus Freedom on the Net 2015*. freedomhouse.org, 2015. https://freedomhouse.org/report/freedom-net/2015/Belarus

GEM (2014) — Unknown Author: *Consistently high level of participation in entrepreneurship supported by favorable environmental conditions.* Global Entrepreneurship Monitor, 2014. http://www.gemconsortium.org/country-profile/122

Gibson (2015) — Gibson, C. Todd, et al: *Joining the Crowd: SEC Adopts Final Crowdfunding Regulations - Part I* K&L Gates, 2015. http://www.klgates.com/joining-the-crowd--sec-adopts-final-crowdfunding-regulations---part-i-11-10-2015/

Graham (2006) — Graham, Paul: *Why Startups Condense in America*. paulgraham.com, 2006. http://paulgraham.com/america.html

Hathaway (2016) — Hathaway, Ian: *Accelerating growth: Startup accelerator programs in the United States.* Brookings Institution, 2016. https://www.brookings.edu/research/accelerating-growth-startup-accelerator-programs-in-the-united-states/

Huet (2016) — Huet, Ellen: *How Tech Startup Founders Are Hacking Immigration*. Bloomberg Businessweek, 2016. http://www.bloomberg.com/news/articles/2016-02-10/how-tech-startup-founders-are-hacking-immigration

IKT.NRW (2014) Kollmann, Tobias, et al: *Startup - Ecosystem NRW: Rahmenbedingungen für IKT-Gründer auf Kreisebene*
Cluster Informations- und Kommunikationstechnologie Nordrhein-Westfalen,2014.
http://ikt.nrw.de/fileadmin/user_upload/Dokumente/Startup-Ecosystem_NRW.pdf

IMAGURU (2016) Unknown Author: *About IMAGURU*
imaguru.co, 2016.
http://imaguru.co/en/about

Isenberg (2011) Isenberg, Daniel: *Introducing the Entrepreneurship Ecosystem: Four Defining Characteristics*.
Forbes online, 2011.
http://www.forbes.com/sites/danisenberg/2011/05/25/introducing-the-entrepreneurship-ecosystem-four-defining-characteristics/#11e0c77738c4

Isenberg (2014) Isenberg, Daniel: *What an Entrepreneurial Ecosystem Actually Is*.
Harvard Business Review, 2014.
https://hbr.org/2014/05/what-an-entrepreneurial-ecosystem-actually-is

Kasdan (2013) Kasdan, Michael, et al: *Intellectual property for startups*.
Ernst & Young, Global Center for Entrepreneurship and Innovation, 2013.
http://www.ey.com/GL/en/Services/Strategic-Growth-Markets/Center-for-Entrepreneurship-and-Innovation---Intellectual-property-for-startups

Kauffman Foundation (2010) Kane, Tim: *The Importance of Startups in Job Creation and Job Destruction.*
Erwing Marion Kauffman Foundation, 2010.
http://www.kauffman.org/~/media/kauffman_org/research%20reports%20and%20covers/2010/07/firm_formation_importance_of_startups.pdf

Kauffman Foundation (2014) Unknown Author: *Entrepreneurship Policy Digest*. Ewing Marion Kauffman Foundation analysis of data from the U.S. Census Bureau Business Dynamics Statistics.

Erwing Marion Kauffman Foundation, 2014.
http://ow.ly/Ocbls

KfW (2015) Unknown Author: *Number of business founders in Germany still rising for the time being – with a slowdown in the foreseeable future.*
KfW Start-up Monitor, 2015.
https://www.kfw.de/KfW-Group/Newsroom/Aktuelles/Pressemitteilungen/Pressemitteilungen-Details_276737.html

Kravets (2012) Kravets, Leonid: *Patents Are Worthwhile For Startups To Pursue In The US, But Not Abroad*.
TechCrunch, 2012.
http://techcrunch.com/2012/08/25/patents-are-worthwhile-for-startups-to-pursue-in-the-us-but-not-abroad/

Laurinaviciu s (2016) Laurinavicius, Tomas: *Top 9 Surprising Reasons To Bootstrap In Lithuania.*
Forbes online, 2016.
http://www.forbes.com/sites/tomaslaurinavicius/2016/01/31/bootstrap-in-lithuania/4/#68bbd60746fd

Leticia (2014) Leticia: *Startup Stages: What Are They?*
Majoran coworking community, 2014.
https://majoran.co/startup-stages/

McCarthy (2013) McCarthy, Niall: *Two Thirds of Working-Age Europeans Know a Foreign Language.*
statista.com, 2013.
https://www.statista.com/chart/1513/two-thirds-of-working-age-europeans-know-a-foreign-language/

Miliauskiene (2016) Miliauskiene, Inga: *We Have Start-Ups – What about Unicorns?*
Lithuanian Private Equity and Venture Capital Association, 2016.
http://vca.lt/en/associated-members/we-have-start-ups-what-about-unicorns/

Nazar (2013) Nazar, Jason: *16 Surprising Statistics About Small Businesses.* Forbes online, 2013. http://www.forbes.com/sites/jasonnazar/2013/09/09/16-surprising-statistics-about-small-businesses/#f647a503078c

NVCA (2011) Unknown Author: V*enture Impact: The Economic Importance of Venture Capital-Backed Companies to the U.S. Economy*. National Venture Capital Association, 2011. http://www.jumpstartnetwork.org/sitecore/content/jumpstartinc/home/results/dl/~/media/JumpStartInc/Images/Results-Page/2011-NVCA-VentureImpactReport.ashx

oxforddictionaries.com (2016) Unknown Author: *Crowdfunding*. oxforddictionaries.com, 2016 http://www.oxforddictionaries.com/us/definition/american_english/crowdfunding (28.05.2016)

Practica Capital (2014) Unknown Author: *Lithuanian startup ecosystem - pool of opportunities for foreign and local startups and VCs.* practica.lt, 2014 http://practica.lt/en/news1/lithuanian+startup+ecosystem++pool+of+opportunities+for+foreign+and+local+startups+and+vcs/

pravo.by (2005) Unknown Author: *Декрет Президента Республики Беларусь № 12 от 22 сентября 2005 г*. pravo.by, 2005. http://pravo.by/main.aspx?guid=3871&p0=Pd0500012

Radkevitch-Turlo (2016) Radkevitch-Turlo, Vita: Lithuanian Startup Scene Is Green But Blossoming. GoalEurope, 2016. http://goaleurope.com/2016/06/01/LITHUANIAN-STARTUP-SCENE-IS-CATCHING-UP-WITH-CEE-LEADERS/

Revzin (2015) Revzin, Yan:*The Major Reasons Startups Fail - And How You Can Avoid Them.*

Forbes online, 2015.
http://www.forbes.com/sites/theyec/2015/03/05/the-major-reasons-startups-fail-and-how-you-can-avoid-them/#7d11a65e11df

Robehmed (2012) Robehmed, Natalie: *What is a Startup*.
Forbes online, 2012.
http://www.forbes.com/sites/natalierobehmed/2013/12/16/what-is-a-startup/#30ae5f974c63http://www.forbes.com/sites/natalierobehmed/2013/12/16/what-is-a-startup/#30ae5f974c63

Startup Commons (2016) Unknown Author: *Startup Ecosystem*.
Startupcommons.org, 2016.
http://www.startupcommons.org/what-is-startup-ecosystem.html

Startup Genome (2012) Unknown Author: *Startup Ecosystem Report 2012.*
clustermapping.us, 2012.
https://www.clustermapping.us/sites/default/files/files/resource/Startup%20Ecosystem%20Report%202012.pdf

Startup House (2014) Unknown Author*: Этапы развития стартапов.*
startup-house.ru, 2014
http://startup-house.ru/stati-pro-startapy/link/etapy-razvitiya-startapov

Startuphighway.com (2016) Unknown Author: *Lithuania: Startup Ecosystem & Entrepreneurial environment.*
startuphighway.com, 2016.
http://startuphighway.com/wp-content/uploads/2015/05/Lithuanian_startup_ecosystem.pdf

Strategic Exits Corp. (2014) Unknown Author: *Startup Funding - Sources of Financing*.
angelblog.net, 2014.
http://www.angelblog.net/Startup_Funding_Sources_of_Financing.html

Tansey Tansey, Bernadette: *11 Ways to Finance a Start Up*.

(2012) CNBC, 2012.
http://www.cnbc.com/2012/05/25/11-Ways-to-Finance-a-Start-Up.html?slide=10

USCIS (2016) Unknown Author: *H-1B Fiscal Year (FY) 2017 Cap Season*.
U.S. Citizenship and Immigration Services, 2016.
https://www.uscis.gov/working-united-states/temporary-workers/h-1b-specialty-occupations-and-fashion-models/h-1b-fiscal-year-fy-2017-cap-season

Vaidyanathan (2015) Vaidyanathan, Ramakrishnan: *Patent Pills for Startups: Foundations and Strategies.*
yourstory.com, 2015.
https://yourstory.com/author/ramakrishnan-vaidyanathan/

Waldo (2015) Waldo, Lloyd: *7 Things the Government Could Do For the Startup Ecosystem.*
startupyard.com, 2015.
http://startupyard.com/7-things-the-government-could-do-for-the-startup-ecosystem/

Weinglass (2016) Weinglass, Simona: *Why Lithuania is punching above its startup weight.*
geektime.com, 2016.
http://www.geektime.com/2015/06/04/why-lithuania-is-punching-above-its-startup-weight/

whitehouse.gov (2016) Unknown Author: *Startup America: Progress Report*.
whitehouse.gov, 2016.
https://www.whitehouse.gov/economy/business/startup-america/progress-report#access-to-capital

whitehouse.gov (2016) Unknown Author: *Fact Sheet: White House launches "Startup America" Initiative.*
whitehouse.gov, 2016.
https://www.whitehouse.gov/startup-america-fact-sheet

wikipedia.org (2016) Unknown Author: *Startup Company*. wikipedia.org, 2016. https://en.wikipedia.org/wiki/Startup_company

World Bank. (2016) Unknown Author: *Doing Business 2016: Economy Rankings*. World Bank, 2016. http://www.doingbusiness.org/rankings

Литвин (2016) Литвин, Александр: "*Время подумать о потенциале страны!": советы для Беларуси от Microsoft, первого европейского акселератора Wayra и литовского венчурного фонда*. startuplife.by, 2016. http://startuplife.by/tips-belarus.html

Ляховский (2014) Ляховский, Николай: *Проблемы и тенденции развития венчурной деятельности в Беларуси*. avinvest.by, 2014. http://avinvest.by/novosti/problemyi-i-tendentsii-razvitiya-venchurnoy-deyatelnosti-v-belarusi

МИД РБ (2016) Unknown Author: *Консульский сбор за рассмотрение ходатайства иностранного гражданина о выдаче визы Республики.* mfa.gov.by, 2016. http://mfa.gov.by/upload/123/1.pdf

НБРБ (2016) Unknown Author: *Платежный баланс Республики Беларусь*. Национальный Банк Республики Беларусь, 2016. http://www.nbrb.by/statistics/BalPay/

НБРБ (2016) Unknown Author: *Валовой внешний долг Республики Беларусь*. nbrb.by, 2016. http://www.nbrb.by/statistics/externaldebt

НОУ Unknown Author: *Тенденции развития информационных технологий*

ИНТУИТ (2009) intuit.ru, 2009. http://www.intuit.ru/studies/courses/532/388/lecture/9001?page=1

ЮНИТЕР (2014) Unknown Author: *ИТ-рынок в Беларуси*. investinbelarus.by, 2014. http://investinbelarus.by/docs/-21948.pdf

ЮНИТЕР (2015) Unknown Author*: Рынок IT-услуг 2015*. investinbelarus.by, 2015. http://investinbelarus.by/docs/IT.pdf

List of Appendixes

Appendix, Part 1

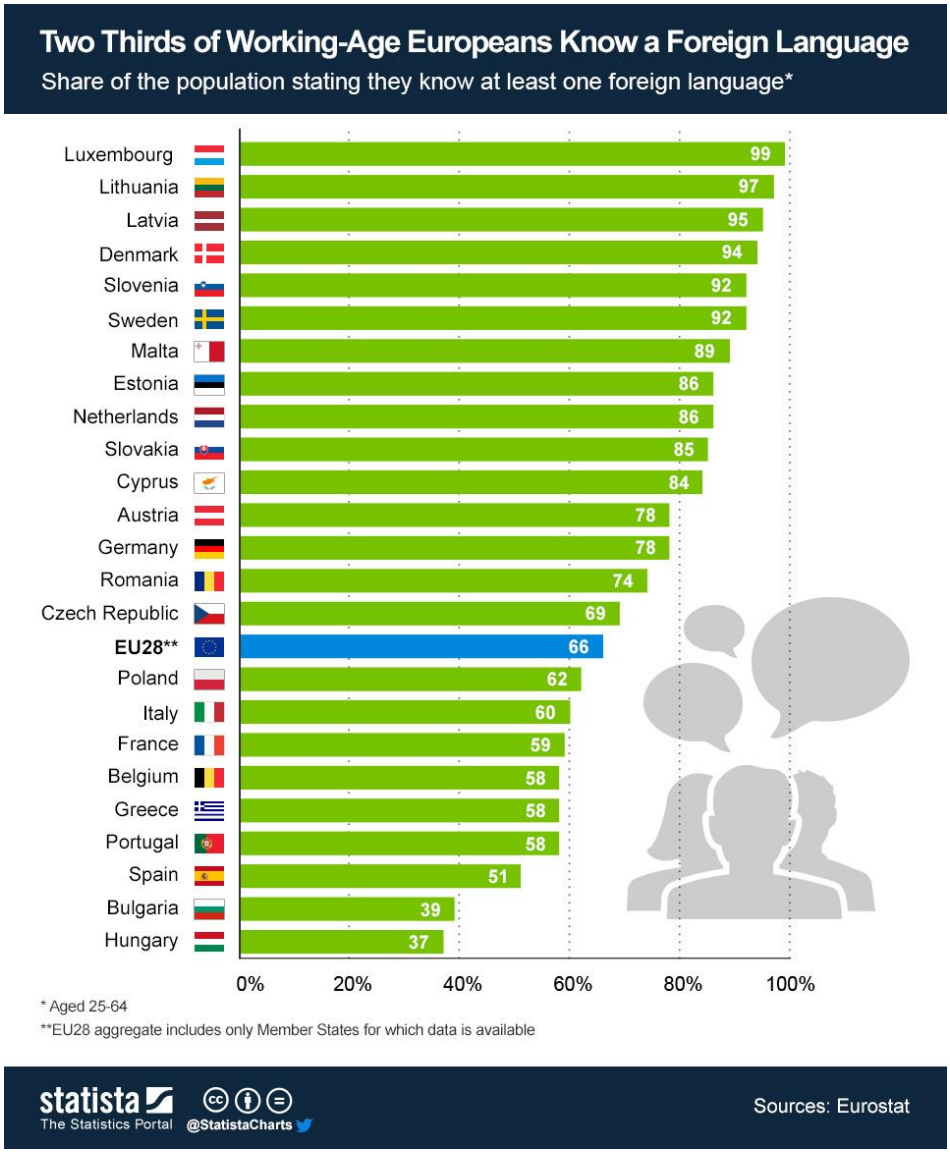
The Global Startup Ecosystem Ranking 2015[111]

	Ranking		Performance	Funding	Market Reach	Talent	Startup Exp.	Growth Index
Silicon Valley	1	◂	1	1	4	1	1	2.1
New York City	2	▲ 3	2	2	1	9	4	1.8
Los Angeles	3	◂	4	4	2	10	5	1.8
Boston	4	▲ 2	3	3	7	12	7	2.7
Tel Aviv	5	▼ 3	6	5	13	3	6	2.9
London	6	▲ 1	5	10	3	7	13	3.3
Chicago	7	▲ 3	8	12	5	11	14	2.8
Seattle	8	▼ 4	12	11	12	4	3	2.1
Berlin	9	▲ 6	7	8	19	8	8	10
Singapore	10	▲ 7	11	9	9	20	9	1.9
Paris	11	◂	13	13	6	16	15	1.3
Sao Paulo	12	▲ 1	9	7	11	19	19	3.5
Moscow	13	▲ 1	17	15	8	2	20	1.0
Austin	14	NEW	16	14	18	5	2	1.9
Bangalore	15	▲ 4	10	6	20	17	12	4.9
Sydney	16	▼ 4	20	16	17	6	10	1.1
Toronto	17	▼ 9	14	18	14	15	18	1.3
Vancouver	18	▼ 9	18	19	15	14	11	1.2
Amsterdam	19	NEW	15	20	10	18	16	3.0
Montreal	20	NEW	19	17	16	13	17	1.5

[111] http://www.businesslocationcenter.de/imperia/md/blc/service/download/content/the_global_startup_ecosystem_report_2015.pdf

Appendix, Part 2

Share of the European Population stating they know at least one foreign language[112]



[112] https://www.statista.com/chart/1513/two-thirds-of-working-age-europeans-know-a-foreign-language/

Declaration of Independence

I hereby declare that this paper is the result of my own independent scholarly work and that in all cases material from the work of others is acknowledged.

Quotations and paraphrases are clearly indicated.

This written work has not been submitted for academic critical elsewhere.

Mittweida, 10th of October, 2016

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